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Hand, Posner, and the Myth of the "Hand Formula"[†]

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The legal literature generally assumes that an aggregate-risk-utility test is employed to determine whether conduct was reasonable or negligent. However, this test is infrequently mentioned by the courts and almost never explains their decisions. Instead, they apply, explicitly or implicitly, various justice-based standards that take into account the rights and relationships among the parties.

This is true even for the two judges most closely identified with the aggregate-risk-utility test: Learned Hand and Richard Posner. During the five decades (1909-1961) that Hand served as a federal judge, he mentioned the test in only eleven opinions, between 1938 and 1949, and in none of those opinions did he actually apply the test to resolve the negligence issue. In his last reference to the test, in 1949, he essentially abandoned it. None of his fellow circuit judges ever mentioned the test.

Posner claims that the Hand formula expresses an economic efficiency interpretation of negligence that has long been implicit in judicial opinions. However, Posner's arguments are based on speculative and implausible assumptions, overbroad generalizations, selective quotations, and superficial descriptions of cases that misstate or ignore facts, language, rationales, and holdings that are inconsistent with his argument. The same flaws are apparent in Posner's attempts to apply the Hand formula in his own judicial opinions. Neither he nor his like-minded colleague, Frank Easterbrook, has been able to employ the Hand formula to resolve the negligence issue in any case, and none of their fellow circuit judges has attempted to do so.

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INTRODUCTION

There is a puzzling disjunction, at least in common law jurisdictions, between the law of negligence that is expounded in academic legal texts and both the expectations of ordinary people and the actual practice of the courts. Subject to varying reservations and qualifications,¹ common-law academic texts generally assume that whether a person's conduct is negligent, and hence subject to legal liability for harms caused by such conduct, depends on whether the aggregate risks (expected losses or costs) created by the conduct are greater than the aggregate utility (expected gains or benefits) of the conduct.² Although some scholars once asserted that this aggregate-risk-utility definition of negligence is consistent with the principles of justice, almost all of them now acknowledge that it is a transparent implementation of the basic principles of utilitarianism and its modern offshoot, economic efficiency theory, and as such is in direct conflict with the principles of justice.³ Yet it is usually thought that the fundamental purpose of the law should be

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- 1 See Richard W. Wright, *Justice and Reasonable Care in Negligence Law*, 47 Am. J. Juris. 143, 150-58 (2002).
 - 2 See, e.g., Dan B. Dobbs, *The Law of Torts* §§ 144-46 (2000); John G. Fleming, *The Law of Torts* 114-19 (8th ed. 1992); 3 Fowler V. Harper et al., *The Law of Torts* § 16.9, at 467-78 (2d ed. 1986); Michael A. Jones, *Textbook on Torts* § 3.1.3.3 (7th ed. 2000); W. Page Keeton et al., *Prosser and Keeton on the Law of Torts* § 31, at 170-73 & n.46 (5th ed. 1984); W.V.H. Rogers, Winfield and Jolowicz on Tort 201-02 (16th ed. 2002); William J. Stewart, *Delict* 61-62 (2d ed. 1993) (Scottish law); Francis Trindade & Peter Cane, *The Law of Torts in Australia* 414-18 (2d ed. 1993); Stephen Todd et al., *The Law of Torts in New Zealand* § 6.2, at 406 & n.83 (2d ed. 1997); Patrick J. Kelley, *Teaching Torts: The Carroll Towing Company Case and the Teaching of Tort Law*, 45 St. L. U. L.J. 731, 732-35 & nn.4-5 (2001) (discussing the prominent treatment in current American torts casebooks of Judge Learned Hand's aggregate-risk-utility formula in the *Carroll Towing* case); cf. Basil S. Markesinis & Hannes Unberath, *The German Law of Torts: A Comparative Treatise* 85 (4th ed. 2002) ("[M]athematical formulae, which attempt to work out negligence on the basis of a yield-cost analysis ... can also be found in German legal writings. It is unclear, however, whether this suggests that the German legal literature is ready for a more economic analysis of legal problems such as is found in American academic literature."); Walter van Gerven et al., *The Common Law of Europe Casebooks*, *Tort Law* § 3.2.1, at 305 & n.107 (2000) (mentioning the balancing of risks against utility and the "Learned Hand formula" only with respect to English law).
 - 3 For a detailed discussion of the shifts in position by various scholars, including Jules Coleman, Ronald Dworkin, George Fletcher, Kenneth Simons, and Ernest Weinrib, see Wright, *supra* note 1, at 167-94.

and is the implementation of justice,⁴ and people commonly prefer the just result, which focuses on each individual's right to equal freedom, dignity, and respect, over the efficient result, which focuses on maximizing the aggregate satisfaction of impartially summed individual interests.⁵

For example, people generally believe that it is not properly respectful of the equal dignity and autonomy of others, and hence not just, for you to create substantial unaccepted foreseeable risks of injury to others' persons or property merely for your own personal benefit, even if your expected gain will exceed their expected loss. Indeed, corporations and individuals who are thought to have done so are often held liable for punitive damages.⁶ Conversely, it is generally believed (and the law agrees) that you are not morally required to subject yourself to significant burdens or risks in order to attempt to rescue another from a dangerous situation that you did not create, even if the risk to you seems to be less than the expected utility of the rescue attempt.⁷ If you nevertheless decide to do so in an attempt to save someone from a dangerous situation that was negligently created by a third party and you are injured or even killed while making the attempt, you will be praised as a hero rather than being judged contributorily negligent, even if the risk of your suffering injury was greater than the chance of your saving the other, unless your attempt was foolhardy, rash, wanton, or reckless because there was no fair chance of saving the other.⁸ In sum, although it makes no difference under the aggregate-risk-utility test who is getting the benefits and who is suffering the losses, or who is putting whom at risk for whose benefit, it makes a big

4 See The Federalist No. 51, at 358 (James Madison) (Benjamin Fletcher Wright ed., 1961) ("Justice is the end of government; it is the end of civil society."); Richard W. Wright, *The Principles of Justice*, 75 Notre Dame L. Rev. 1859, 1859, 1871 & n.62 (2000); cf. William M. Landes & Richard A. Posner, *The Economic Structure of Tort Law* 9 (1987) (conceding that "most lawyers and law professors still believe ... that the actual as well as the ideal function of tort law is to achieve fairness rather than efficiency").

5 See Wright, *supra* note 1, at 163-70; Wright, *supra* note 4, at 1861-71.

6 See Stephen G. Gilles, *The Invisible Hand Formula*, 80 Va. L. Rev. 1015, 1046-47 (1994); Michael D. Green, *Negligence = Economic Efficiency: Doubts >*, 75 Tex. L. Rev. 1605, 1640-42 (1997); Gary T. Schwartz, *The Myth of the Ford Pinto Case*, 43 Rutgers L. Rev. 1013, 1035-38 (1991); Richard W. Wright, *The Standards of Care in Negligence Law*, in *Philosophical Foundations of Tort Law* 249, 263 (David G. Owen ed., 1995); *infra* Section II.F.

7 See Restatement (Second) of the Law of Torts § 291 cmt. f, § 314 & cmt. c (1965) [hereinafter Restatement (Second) of Torts]; *infra* Section II.H.

8 See Wright, *supra* note 6, at 270-71; *infra* Section II.H.

difference as a matter of common morality and the principles of justice that are a part of that common morality.⁹

It therefore should not be surprising that recent analyses of American and British court decisions have found that the aggregate-risk-utility test is infrequently mentioned by the courts, almost never included in jury instructions, rarely actually employed in judicial opinions, and almost never explains the actual results reached by the courts.¹⁰ But this only deepens the mystery. Why does the academic literature generally assume, incorrectly (albeit with reservations and qualifications), that negligence is defined by the aggregate-risk-utility test, and why does that assumption also frequently appear in the prefatory discussion, but not in the analysis or holdings, of some courts?

The answer, I believe, lies in the history of the American Law Institute's Restatement of the Law of Torts. Despite the lack of support for the aggregate-risk-utility test in the preexisting cases,¹¹ a version of the test seems to have been adopted in 1934 in section 291(1) of the first Restatement:

Where an act is one which a reasonable man would recognize as involving risk of harm to another, the risk is unreasonable and the act is negligent if the risk is of such magnitude as to outweigh what the law regards as the utility of the act or of the particular manner in which it is done.¹²

Although it is little noted today and misrepresented in the Draft Restatement Third, the risk-utility test in the first Restatement contained significant qualifications and exceptions, such as the focus on "what the law regards as the [social] utility of the act" and the exceptions for

⁹ See Wright, *supra* note 6, at 255-74.

¹⁰ See Symposium on Negligence in the Courts: *The Actual Practice*, 77 Chi.-Kent L. Rev. 423 (2002).

¹¹ See Stephen G. Gilles, *On Determining Negligence: Hand Formula Balancing, the Reasonable Person Standard, and the Jury*, 54 Vand. L. Rev. 813, 822, 838-40 & n.90 (2001) [hereinafter Gilles, *Hand Formula Balancing*]; Stephen G. Gilles, *The Emergence of Cost-Benefit Balancing in English Negligence Law*, 77 Chi.-Kent L. Rev. 489, 501-04 & nn.38-40 (2002) [hereinafter Gilles, *English Negligence Law*]; Green, *supra* note 6, at 1617-20, 1622-26 & n.95; Thomas C. Grey, *Accidental Torts*, 54 Vand. L. Rev. 1225, 1279 n.168 (2001); William E. Nelson, *From Fairness to Efficiency: The Transformation of American Tort Law in New York, 1920-1980*, 47 Buff. L. Rev. 117, 143-46 & n.133 (1999); Wright, *supra* note 1, at 146-48; *infra* Sections I.A., II.A., II.B.

¹² Restatement of the Law of Torts § 291 (1934) [hereinafter Restatement of Torts]. Sections 292 and 293 elaborate on the factors relevant to evaluating the conduct's risks and expected utility, respectively.

nonfeasance (failure to aid others one did not put at risk) and for land occupiers with respect to uninvited entrants onto their land.¹³ Moreover, the drafters of the first Restatement did not seem to have in mind a straightforward risk-utility balancing test, but rather only a test that would prevent defendants from being held liable for the inherent risks of socially valuable activities if those risks were not too serious, necessary for the obtaining of some benefit desired by those being put at risk or by everyone in society, reduced to the maximum extent feasible without significantly impairing the desired benefit, and significantly outweighed by the desired benefit.¹⁴

However, the apparent adoption of the aggregate-risk-utility test in the first Restatement led to increasing references to the test in academic expositions of the meaning of negligence or (un)reasonableness, even though the test continued to be rarely mentioned by the courts.¹⁵ The only judge who showed any significant interest in the test was Judge Learned Hand of the U.S. Court of Appeals for the Second Circuit, who was one of the founders of the American Law Institute, an original member of its Council, and an active participant in its discussions of the various Restatements.¹⁶ Although his opinions never referred to the relevant Restatement sections, he set forth and occasionally purported to apply an aggregate-risk-utility test of negligence in a series of opinions that commenced in 1938, four years after the publication of the first Restatement.¹⁷ In one of these opinions, *United States v. Carroll Towing Co.*,¹⁸ he restated the test in a mathematical formula that has since become known (in both its verbal and mathematical forms) as the "Hand formula." According to Hand's formula, a person's conduct is negligent if and only if the risk (P times L) created by the conduct is greater than its utility (B), where P is the probability of an injury occurring, L is the magnitude of the injury, and B is the burden or cost that would have to be borne to avoid engaging

13 See Wright, *supra* note 1, at 153-56, 160-61 & n.61.

14 See *id.* at 153-56; see *infra* text accompanying notes 239-42; cf. Gilles, *English Negligence Law*, *supra* note 11, at 491, 493, 498-500, 584-86, *passim* (finding a similar "disproportionate-cost" test, rather than literal cost-benefit balancing, in British negligence cases); Richard W. Wright, *Negligence in the Courts: Introduction and Commentary*, 77 Chi.-Kent L. Rev. 425, 439-40, 462 (2002) (discussing the non-balancing, prohibitory-cost nature of the "disproportionate-cost" test and its application in British and American negligence cases); *infra* Sections II.C., II.D., II.E.

15 See Wright, *supra* note 14, at 449-55.

16 See Gerald Gunther, *Learned Hand: The Man and the Judge* 410-15 (1994); Herbert F. Goodrich, *Judge Learned Hand and the Work of the American Law Institute*, 60 Harv. L. Rev. 345 (1947); Green, *supra* note 6, at 1629.

17 See *infra* Section I.

18 159 F.2d 169 (2d Cir. 1947) (discussed in *infra* Section I.D.).

in the conduct, including the foregone benefits expected from engaging in the conduct.¹⁹

The risk-utility language in section 291(1) of the first Restatement was carried over intact in section 291 of the Restatement Second, which was published in 1965.²⁰ Although initially little noted, Hand's formula in *Carroll Towing* eventually became more popular than Restatement section 291 in the academic literature.²¹ Yet, similar to Restatement section 291, it was infrequently mentioned and almost never applied by the courts, even by other judges in the Second Circuit, and after 1949, Hand himself no longer referred to the formula.²²

A series of publications by Richard Posner, which commenced in the 1970s while he was a professor at the University of Chicago, generated increased attention to Hand's aggregate-risk-utility formula. Posner claims that the Hand formula expresses an economic efficiency interpretation of negligence law and liability in general, which allegedly was commonly applied by the courts, usually implicitly rather than explicitly, long before the first Restatement and the *Carroll Towing* case.²³ While admitting that "only

19 *Id.* at 173.

20 Restatement (Second) of Torts § 291 (1965).

21 See sources cited *supra* note 2.

22 See Ronald J. Allen & Ross M. Rosenberg, *Legal Phenomena, Knowledge, and Theory: A Cautionary Tale of Hedgehogs and Foxes*, 77 Chi.-Kent L. Rev. 683, 701 (2002); Green, *supra* note 6, at 1629-31 & n.115; Kelley, *supra* note 2, at 743 & n.67, 750-53, 757-58; Wright, *supra* note 14, at 449-50; Barbara Ann White, *Risk-Utility Analysis and the Learned Hand Formula: A Hand that Helps or a Hand that Hides?*, 32 Ariz. L. Rev. 77, 79 & n.10 (1990); *infra* Section I.A. There is no reference to Hand's formulation of the negligence issue or to the cases in which he articulated it in any of the articles in a 1947 symposium honoring him for his contributions to the law. See *Symposium*, 60 Harv. L. Rev. 325 (1947). Michael Smith, who once researched the history of the Second Circuit, notes that "[t]he formula was not much noticed at the time, and in truth it may be a bad way to think about tort liability." Michael E. Smith, *Let Us Now Praise Famous Men*, 82 Cal. L. Rev. 1643, 1643 n.1, 1646 (1994) (book review of Gunther, *supra* note 16). Yet, given its current academic notoriety, he questions the lack of any reference to the formula or *Carroll Towing* in Gerald Gunther's biography of Learned Hand, except in the foreword by Justice Powell. *Id.* at 1646. Shortly after his biography of Hand was published, Gunther told me that there were no references to the aggregate-risk-utility test in Hand's papers, other than in his published opinions.

23 Posner's claim was first stated with respect to negligence law in Richard A. Posner, *A Theory of Negligence*, 1 J. Legal Stud. 29 (1972) [hereinafter Posner, *Theory of Negligence*], and subsequently was expanded to encompass all of tort law, including, e.g., liability for intentional torts and the actual-causation requirement. See Richard A. Posner, *Economic Analysis of Law* 27, 179-233 (5th ed. 1998) [hereinafter Posner, *Economic Analysis*]; Landes & Posner, *supra* note 4, at 1, 85-160, 228-51. I

a few other decisions have used [*Carroll Towing's*] algebraic formulation," he claims that "Hand was purporting only to make explicit what had long been the implicit meaning of negligence. ... In fact something like the Hand formula has long been used to decide negligence cases."²⁴ When Posner became a federal judge, he attempted to apply the Hand formula in actual cases and then cited his own opinions to support his claims regarding the courts' supposed general use of the Hand formula.²⁵

Contrary to Posner's claims, Hand's formula is rarely cited and even more rarely used, explicitly or implicitly, by the courts. Recent studies all conclude that there was minimal explicit or implicit use of any aggregate-risk-utility test prior to and for several decades after the test's adoption in the first Restatement.²⁶ Apart from one very limited exception, the aggregate-risk-utility test still does not appear in standard form jury instructions,²⁷ and the

criticize Posner's and other legal economists' attempts to explain the actual-causation requirement and the distinct liability rules for intentional torts in Richard W. Wright, *Actual Causation vs. Probabilistic Linkage: The Bane of Economic Analysis*, 14 J. Legal Stud. 435 (1985); Richard W. Wright, *The Efficiency Theory of Causation and Responsibility: Unscientific Formalism and False Semantics*, 63 Chi.-Kent L. Rev. 553 (1987) [hereinafter Wright, *Unscientific Formalism*]; Richard W. Wright, *Principled Adjudication: Tort Law and Beyond*, 7 Canterbury L. Rev. 265, 286-89 (1999) [hereinafter Wright, *Principled Adjudication*].

24 Landes & Posner, *supra* note 4, at 85; see Posner, *Economic Analysis*, *supra* note 23, at 182 ("Although the Hand Formula is relatively recent, the method it capsulizes has been used to determine negligence ever since negligence was first adopted as the standard to govern accident cases."); cf. Robert L. Rabin, *Law for Law's Sake*, 105 Yale L.J. 2261, 2275 (1996) ("Long before *Carroll Towing* was decided, common law judges were speaking the prose version of the Learned Hand formula without knowing it.").

25 See, e.g., Richard A. Posner, *Economic Analysis of Law* § 6.1 n.1 (4th ed. 1992) (citing, in addition to *Carroll Towing*, *United States Fidelity & Guaranty Co. v. Jadranska Slobodna Plovidba*, 683 F.2d 1022 (7th Cir. 1982) (Posner, J.), and *McCarty v. Pheasant Run, Inc.*, 826 F.2d 1554 (7th Cir. 1987) (Posner, J.)). In the most recent (1998) edition of his text, Posner was able to cite a couple of opinions by judges other than himself as supposed "contemporary applications of the [Hand] formula." Posner, *Economic Analysis*, *supra* note 23, § 6.1 n.1 (citing *Dobson v. Louisiana Power & Light Co.*, 567 So. 2d 569, 574-75 (La. 1990); *Brotherhood Shipping Co. v. St. Paul Fire & Marine Ins. Co.*, 985 F.2d 323, 327-29 (7th Cir. 1993) (Posner, J.); *Bammerlin v. Navistar Int'l Transp. Corp.*, 30 F.3d 898, 902 (7th Cir. 1994) (Easterbrook, J.)). In Wright, *supra* note 14, at 457-63, I discuss the *Dobson* court's supposed application of the Hand formula and the non-Hand-formula criteria that are actually applied by the Louisiana courts. Posner's and Easterbrook's opinions are discussed in *infra* Section III.

26 See *supra* notes 11, 15, 22 and accompanying text.

27 See Patrick J. Kelley & Laurel A. Wendt, *What Judges Tell Juries About Negligence:*

Hand formula continues to be rarely mentioned in all but two United States jurisdictions: the state of Louisiana and Posner's own court, the U.S. Court of Appeals for the Seventh Circuit.²⁸ From the time that it was decided in 1947 through July 2002, *Carroll Towing* was cited only once by the U.S. Supreme Court (in an offhand "cf." reference in *East River S.S. Corp. v. Transamerica Delaval, Inc.*²⁹); fifty-seven times by the federal circuit courts;³⁰ twice by the U.S. Court of Claims; forty-one times by the federal district courts; and forty-nine times by state courts. Twenty-five of the fifty-seven federal circuit court citations were from the Seventh Circuit, all after Posner joined the court, and almost all of these citations were by Posner or Frank Easterbrook, a like-minded efficiency advocate and former colleague of Posner's at the University of Chicago; none of their fellow circuit judges have attempted to employ the Hand formula.³¹ The forty-nine state court citations came from only twenty-three states: Louisiana (7); Idaho (4); New Jersey (4); Mississippi (3); New York (3); Washington (3); Wyoming (3); and the other sixteen states only 1 or 2 each. Moreover, as is demonstrated by the discussions of the Second Circuit cases in Part I below, a citation to *Carroll Towing* does not necessarily represent a cite to Hand's aggregate-risk-utility formula, much less an attempt to actually apply the formula.

Although a significant number of courts have occasionally mentioned some non-Hand-formula version of an aggregate-risk-utility test of negligence, very few actually attempt to apply the test, and even for these few, the actual reasoning and results are almost never based on the test.³² Indeed, as this

A Review of Pattern Jury Instructions, 77 Chi.-Kent L. Rev. 587, 600, 618-20 (2002); Gilles, *supra* note 6, at 1015-17 & n.6; Wright, *supra* note 14, at 443-44 & n.74.

28 See Allen & Rosenberg, *supra* note 22, at 701; Wright, *supra* note 14, at 449-50.

29 476 U.S. 858 (1986). The Court adopted in federal admiralty law the generally accepted rule that contract law rather than tort law governs damage that a defective product causes to itself. *Id.* at 871-72. As part of its reasoning, the Court stated,

[W]hen a product injures itself, the commercial user stands to lose the value of the product, risks the displeasure of its customers who find that the product does not meet their needs, or, as in this case, experiences increased costs in performing a service. Losses like these can be insured. Society need not presume that a customer needs special protection [for these commercial-type losses]. The increased cost to the public that would result from holding a manufacturer liable in tort for injury to the product itself is not justified. Cf. *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (CA2 1947).

Id. (first citations omitted).

30 First (5), Second (5), Third (2), Fourth (2), Fifth (4), Sixth (3), Seventh (25), Eighth (1), Ninth (3), Tenth (2), Eleventh (1), D.C. (4).

31 See *infra* Section III.A.

32 See Allen & Rosenberg, *supra* note 22, at 709-17; Wright, *supra* note 14, at 434,

article demonstrates, this is true even for the two judges who are most strongly associated with the aggregate-risk-utility test: Learned Hand and Richard Posner. In Part I, I discuss Learned Hand's advocacy and purported use of the aggregate-risk-utility test, which occurred during only twelve years out of the over five decades that he served as a federal judge, and the lack of references to Hand's formula by his fellow judges in the Second Circuit during those five decades. In Part II, I examine Richard Posner's academic discussions of the courts' supposed use of the aggregate-risk-utility test. In Part III, I discuss Posner's and Easterbrook's attempts to employ the Hand formula in their judicial opinions and the non-use of the Hand formula by their fellow circuit judges.

I. JUDGE LEARNED HAND

A. Learned Hand, the "Hand Formula," and the Second Circuit, 1914-1961

Learned Hand was a judge on the U.S. Court of Appeals for the Second Circuit from December 20, 1924,³³ until his death on August 18, 1961.³⁴ His cousin Augustus Hand, with whom he had a close personal and professional relationship,³⁵ was a judge on the Second Circuit from June 1, 1927,³⁶ until his death on October 28, 1954.³⁷ Prior to their promotions to the circuit court, each was a federal district judge in the Southern District of New York —

450-63; cf. Gilles, *supra* note 6, at 1015-18 (noting "the puzzling status" of the aggregate-risk-utility test in modern American tort law: although the test is "explicitly endorsed by the Restatement of Torts, by the leading treatises, and by courts in most states," courts do not use the test in jury instructions and, "even on appeal, many courts make surprisingly little use of cost-benefit analysis in reviewing negligence cases"); Gilles, *Hand Formula Balancing*, *supra* note 11, at 815 (accepting Gary Schwartz' claims, in his reporter's notes in the Draft Restatement Third, that "the Hand Formula balancing approach is recognized as authoritative by judicial opinions in a majority of states, by the leading torts treatises, and by most contemporary torts scholars," but adding, "there is still certainly room for argument about how strongly the courts are committed to Hand Formula balancing"); cf. Izhak England, *Law and Economics in American Tort Cases: A Critical Assessment of the Theory's Impact on Courts*, 41 U. Toronto L.J. 359 (1991).

33 See 3 F.2d v (1925).

34 See 290 F.2d vii (1961).

35 See Gunther, *supra* note 16, at 21, 646-47; Smith, *supra* note 22, at 1657-58.

36 See 19 F.2d v (1927).

37 See 215 F.2d ix (1955).

Learned from April 26, 1909,³⁸ and Augustus from September 30, 1914³⁹ — and occasionally sat by designation on the Second Circuit. A search of the Westlaw database for all Second Circuit cases that contain the word "negligence" in which either Learned or Augustus Hand wrote the circuit court's opinion⁴⁰ retrieved 211 cases decided before 1945 and 120 cases decided thereafter, including six cases dating back to 1914 in which Learned Hand sat by designation on the circuit court and three dating back to 1918 in which his cousin Augustus did so. The twenty-two opinions delivered after 1953 were all written by Learned; the last was handed down on May 29, 1961. Each judge wrote about half of the 309 opinions that were issued from 1914 through 1953. Although some of these cases were not negligence cases, the great majority were, and the great majority (including some that were not negligence cases) had some discussion of the negligent-conduct issue.

During the almost five decades (1914-1961) spanned by the 331 retrieved cases, Learned Hand referred to an aggregate-risk-utility test for negligence in only eleven opinions. These eleven opinions, beginning with *Gunnarson v. Robert Jacob, Inc.*⁴¹ at the beginning of 1938 and ending with *Moisan v. Loftus*⁴² toward the end of 1949, made up less than one-fifth of the sixty-one retrieved opinions (including one dissent) that Learned Hand wrote between 1938 and 1949.⁴³ There was only one very limited reference to risk-utility balancing in the eighty retrieved opinions that he wrote between 1914 and

38 See 169 F. iii (1909).

39 See 215 F. vii (1914).

40 The search query was "Ju(Hand) & negligence."

41 94 F.2d 170 (2d Cir. 1938) (discussed in *infra* Section I.B.).

42 178 F.2d 148 (2d Cir. 1949) (discussed in *infra* Section I.E.).

43 For an example of a non-Hand-formula negligence opinion by Hand, see his discussion of the "standard of reasonable prudence" in one of his last opinions, *Santomarco v. United States*, 277 F.2d 255 (2d Cir. 1960), which is quoted in *infra* note 114. Another non-Hand-formula case, *Carroll v. United States*, 133 F.2d 690 (2d Cir. 1943), offers an interesting contrast with the (in)famous McDonald's coffee-spill case, *Liebeck v. McDonald's Restaurants, P.T.S., Inc.*, Civ. No. CV 93-02419, 1995 WL 360309 (N.M. Dist. Ct. Aug. 18, 1994), which has been pervasively misstated and maligned by "tort reform" advocates and almost all of the press.

Two rare attempts to discover and accurately report the facts in the *Liebeck* case are Andrea Gerlin, *How Hot Do You Like It?*, Wall St. J., Sept. 1, 1994, at A1, and Aric Press et al., *Are Lawyers Burning America?*, Newsweek, Mar. 2, 1995, at 32. Mrs. Liebeck's son-in-law, Charles Allen, commented on the case in two letters to the editors. Charles Allen, *Fighting Over More than Just Spilled Coffee*, L.A. Times, Mar. 23, 1995, at B7; Charles Allen, *The McDonald's Coffee Spill Case*, Washington Post, Apr. 4, 1995, at A22. These sources report, among other usually ignored or misstated facts, that Mrs. Liebeck suffered severe third-degree burns (full-thickness

1937, and there were no references in the thirty-eight opinions that he wrote between 1950 and 1961.

Hand's one reference to risk-utility balancing prior to 1938 occurred in a 1930 case, *In re Lee Transit Corp.*⁴⁴ The defendant tug operator negligently brought two barges in tow toward a pier at too great a speed. A deck hand on

skin burns that char and blacken the skin and permanently destroy the skin and nerves) to her inner thighs, buttocks, groin, and labia, which required very painful skin grafts, disabled her for two years, and left permanent scars over 16% of her body. The burns occurred when a cup of very hot McDonald's coffee spilled when she was removing the lid to add cream and sugar while sitting in the passenger seat of a parked car (rather than while driving a moving car, as usually reported). The very hot coffee, which she had purchased at a McDonald's drive-up window, was known by McDonald's to have caused hundreds of serious burns, including previous third-degree burns, but not known by consumers to be capable of causing such serious burns. A jury awarded Mrs. Liebeck \$200,000 for her medical bills and past and future pain and suffering, which they reduced to \$160,000 based on their (questionable) finding that she was contributorily negligent. The jury added an additional \$2.7 million in punitive damages (two days' worth of McDonald's coffee sales) to punish McDonald's for its callous disregard for the safety of its customers, which was subsequently reduced by the trial judge to \$480,000 and then settled for an undisclosed amount.

In the 1943 *Carroll* case, a steward on a ship suffered third-degree burns and a consequent permanent disability when a coffeepot full of hot coffee, which the cook had removed from the range and set on the floor of the galley to lessen the risk of spillage from the pitching of the boat during a severe storm, slid across the floor, struck the steward's right foot, and spilled the hot coffee into his boot. The ship's owners and operators were held liable for the cook's negligence, and the steward, whose monthly pay was \$45 a month plus a \$45 per month war bonus, was awarded \$5000 for his past and future pain and suffering and \$8000 for his discounted lifetime lost earnings, based on a one-third disability. *Carroll*, 133 F.2d at 692. Hand's opinion upheld the finding of liability, stating that "[i]t was not permissible to subject the stewards or any other members of the crew to the unpredictable onsets of so dangerous an object," but reduced the damages for lost earnings to \$5700 to account for the temporary nature of the war bonus. *Id.* at 693-94. Unlike the reaction to the (misreported) *Liebeck* case, as far as I am aware no one doubted the seriousness of the injury in *Carroll* or castigated the finding of liability or the damage award.

- 44 37 F.2d 67 (2d Cir. 1930). William Nelson treats Hand's statement in *Sinram v. Pennsylvania Railroad Co.*, 61 F.2d 767, 771 (2d Cir. 1932), that "[o]ur duties are a resultant not only of what we should forecast, but of the propriety of disregarding so much of it as our own interests justify us in putting at risk," as "an explicit, early statement of the calculus of risk later put forward by Hand in *Carroll Towing*." Nelson, *supra* note 11, at 145. However, Hand's statement, which does not provide any formula or criteria for specifying how much risk "our own interests justify," was addressed to the "foreseeable plaintiff" duty issue, rather than the reasonable-care (breach of duty) issue. Hand held that the master of a tug that negligently collided

the defendant's tug, assuming that another person further forward on the tug had failed to secure a line to slow the rapid movement of the barges toward the bulkhead, lost his foot when it was caught in the line as he was trying to wrap it around a bitt.⁴⁵ Hand's opinion reversed the trial judge's finding that the deck hand was contributorily negligent:

We agree that it was somewhat hazardous to intervene, assuming as we must that the barges were moving with considerable speed; we may even concede that a volunteer would not have been justified in so exposing himself, but we cannot agree that an employee in his position was legally at fault.

There are a number of cases in the books dealing with such a situation, and it must be confessed that the law is not clear. We pass those decisions in which life is at risk, since here the question was only of property. No doubt the standard always must be the proper balance between the risk to life or limb and that to the property, and this of course involves the imminence and gravity of the possible injury and of the possible damage. A servant certainly may not greatly hazard his safety for a trifle; it does not follow that he may not incur a slighter chance to protect property of value from present danger. The real question is whether his relation as employee justifies more disregard of himself than if he had no duty to perform. It is on this issue that the

with and damaged the plaintiff's barge was liable for the collision damages, but "need not have considered the possibility that if he struck [and injured the barge], her bargee might be so slack in his care of her as to let her be loaded without examination, and might so expose her to the danger of sinking," *id.* at 771, and, therefore, was not liable for the sinking damages to either the owner of the barge, under mitigation of damages doctrine, or the insurer of the barge, under the "foreseeable plaintiff" duty limitation. *Id.* at 769-71.

Nelson agrees that "except for this one unusual opinion" the state and federal courts in New York did not mention risk-utility balancing prior to the 1940s, apart from occasional consideration of whether a person's interests justified putting themselves, rather than others, at risk. Nelson, *supra* note 11, at 143-46 & n.133. He claims that the courts shifted from fairness to efficiency concerns during the middle of the twentieth century, but his argument employs shifting, deficient conceptions of fairness and efficiency and is based on superficial evidence. For example, his brief discussion of the negligent-conduct issue merely quotes statements from a couple of Hand's opinions and a few other opinions, several of which only mention the probability and magnitude of possible harm but not the burden of precaution, and he provides no description of the facts, results, or actual reasoning in all but one of the cases. *Id.* at 218-20. The case he discusses more fully is discussed in the *infra* text accompanying notes 62-70.

⁴⁵ See *In re Lee Transit Corp.*, 37 F.2d at 67-68.

cases appear not to be in entire accord. There are a number which take into consideration the relation, apparently excusing in an employee conduct which would bar a volunteer. ...

The upshot is that there is a substantial body of authority which excuses an employee in accepting dangers which would bar a volunteer, whether his duty exonerates him further than the interest of an owner in his property we have not to say; perhaps not. What hazards he may safely incur it is indeed idle to try to define; the best one can do is to invoke the supposititious standard of one who is at once faithful but not foolhardy; of a "reasonable" servant so circumstanced. Such a one it seems to us would not have hesitated to do as Nelson did, provoked by the danger he observed to his master's property. In the long run employers will not profit by anything less; they may indeed be called upon to pay for injuries which they otherwise would not, but it is certainly not in their interest to dampen the loyalty of their servants. Nor indeed if it were, would that necessarily be the test, since in such matters the real appeal is to the average opinion as to what conduct is proper. Nobody can doubt that the ordinary man would commend in others — whatever he might do himself — a disposition in the discharge of duty to take chances which would not otherwise be excused.⁴⁶

By this time the aggregate-risk-utility test of negligence already had been formulated in the drafts of the first Restatement in virtually the same form as it was finally published.⁴⁷ Yet, although Hand stated, "No doubt the standard always must be the proper balance between the risk to life or limb and that to the property, and this of course involves the imminence and gravity of the possible injury and of the possible damage," his subsequent discussion clearly indicates that "the proper balance" is not simply a matter of balancing the risk against the utility, but rather varies significantly depending on the relationships among the parties and on who is putting whom at risk for whose benefit, and in the end, "the real appeal is to the average opinion as to what conduct is proper." Hand notes that in a situation like this, in which the plaintiff is putting himself at risk for his employer's benefit in furtherance of but going beyond his duty to his employer, the plaintiff's conduct is deemed "commendable" as long as he is "not foolhardy." This is reasoning based on

46 *Id.* at 68-69.

47 *See Green, supra* note 6, at 624.

the moral norms of equal freedom, justice, and right, rather than on utilitarian risk-utility balancing.⁴⁸

The timing and bunching — between 1938 and 1949 — of Hand's eleven opinions that referred to an aggregate-risk-utility test of negligence, especially when considered in conjunction with his leading role in the formation and ongoing activities of the American Law Institute,⁴⁹ strongly suggest that his references to risk-utility balancing in these opinions were influenced by and indeed were attempts to support the Restatement's novel aggregate-risk-utility definition of negligence, which was published in 1934. Yet his opinions never mentioned the Restatement's definition. This omission has been explained by others by his supposed practice of not citing the Restatements.⁵⁰ However, during my review of Hand's opinions for this article, I found numerous citations to the Restatements, including the Restatement of Torts, although never a citation to Restatement section 291. I suspect that Hand did not cite Restatement section 291 because he recognized that, unlike the other Restatement sections that he did cite, it lacked support in the case law. In the eleven opinions between 1938 and 1949 in which he referred to risk-utility balancing, he attempted to stimulate such judicial support while avoiding a bootstrapping reference to the Restatement's aggregate-risk-utility test, which had almost no support other than in his opinions.

This hypothesis is supported by Hand's practical dismissal of the aggregate-risk-utility test in 1949 in the *Moisan* case⁵¹ and by his failure to refer to it in any of his subsequent negligence opinions. His attempt to stimulate judicial support for the test was unsuccessful, and he himself found it to be of no practical use. Courts continued to ignore the aggregate-risk-utility test, despite its adoption in the Restatement and despite Hand's endorsing the test in his opinions.⁵² Hand could not even generate any support for the test from his fellow judges in the Second Circuit, none of whom mentioned the test in their opinions, even when he was on the appellate panel. None of Augustus Hand's retrieved opinions mention any risk-utility test or engage in any sort of risk-utility balancing, and I am not aware of any mention of the test by any other Second Circuit judge during Learned's lengthy tenure on the court. Only three Second Circuit opinions decided during Hand's tenure, other than

48 See *supra* text accompanying notes 5-9 and *infra* Section II.H.

49 See *supra* text accompanying note 16.

50 See Gilles, *Hand Formula Balancing*, *supra* note 11, at 843 n.101 (citing Green, *supra* note 6, at 1629 n.110 (citing Gunther, *supra* note 16, at 413)).

51 See *infra* Section I.E.

52 See *supra* notes 15, 22, 26-31 and accompanying text.

the denial of rehearing in *Carroll Towing* itself, cited *Carroll Towing*.⁵³ None of the three opinions mentioned Hand's aggregate-risk-utility formula. Two of them had facts very similar to the facts in *Carroll Towing*,⁵⁴ but reached results opposite to the result in *Carroll Towing*.

The first case, *New York Trap Rock Corp. v. Christie Scow Corp.*,⁵⁵ was decided in 1948, only a year after *Carroll Towing*. The plaintiff's scow was shifted by the defendant to a position where it was exposed to ice floes in the Hudson River, which tore a hole in the scow and caused it to sink while the scow's bargee, who was aware that the scow had been shifted and of the existence of the ice floes, was absent for several hours from the scow.⁵⁶ In an opinion by Augustus Hand, which was joined by Learned Hand and Jerome Frank, the court implicitly noted the similarity to *Carroll Towing* (which no doubt was raised by the defendant), but, without making any reference to Learned Hand's aggregate-risk-utility formula or engaging in any risk-utility balancing, absolved the plaintiff of any contributory negligence:

[W]e cannot hold that the danger of injury to the scow from floating ice was so evident to one of the limited experience and skill of a bargee as to render him or the libellant responsible for leaving the vessel at Valvoline Dock 4 during hours when he was not expected to have any work to do in connection with her loading or unloading. *United States v. Carroll Towing Co.*, 2 Cir., 159 F.2d 169.⁵⁷

The second case, *Burns Bros. v. Long Island Rail Road Co.*,⁵⁸ was decided in 1949, only two years after *Carroll Towing*. On the evening of April 1, 1945, an Erie Railroad tug was engaged in "drilling out" (removing) railroad-car floats from a line of tied-together floats, while a Long Island Rail Road tug pushed the outermost floats in and made them fast to those left inside. After the Erie tug had finished drilling out the outermost float, it left without first inspecting the lines of the remaining floats; the Long Island tug had already left. The Central Railroad's float was damaged when it and another float to which it was tied broke loose a short while later and struck and damaged

53 Only two have done so since; both were recent opinions by Guido Calabresi, who, like Posner, is an efficiency-oriented legal academic turned judge. See *Liriano v. Hobart Corp.*, 132 F.3d 124, 131 (2d Cir. 1998); *McCarthy v. Olin Corp.*, 119 F.3d 148, 162 (2d Cir. 1997) (dissenting opinion).

54 See *infra* text accompanying notes 98-101.

55 165 F.2d 314 (2d Cir. 1948).

56 *Id.* at 316.

57 *Id.* at 317.

58 176 F.2d 406 (2d Cir. 1949).

the Burn Bros.' coal barge that was moored downstream.⁵⁹ In an opinion that makes no reference to risk-utility balancing, Judge Harrie Chase, who had joined Learned Hand's opinion in *Carroll Towing*, held that the failure of the Central Railroad to have an attendant on board its float was not negligent:

The float was merely hanging there to be "drilled out" when her turn came and the entire flotilla was protected from drifting in whole or in part so long as the [Long Island tug] stood by. Her situation when so guarded is to be distinguished from that of the barge in *United States v. Carroll Towing Co.*, 2 Cir., 159 F.2d 169, on which living quarters for a bargee were maintained and a bargee was ordinarily present; his absence during a considerable part of his customary working hours was held inexcusable under the circumstances and to be negligence attributable to the barge owner. In contrast, no living quarters are provided on a float and it is not customary to keep a man aboard; there was therefore no reason for the Long Island to rely upon the presence of a floatman in conducting its operations or for Central to anticipate that the Long Island would conduct its operations in such a manner as to make the presence of a floatman necessary.⁶⁰

The factual differences between *Burns Bros.* and *Carroll Towing* are exceedingly small, while the result and reasoning are quite different. In both *Burns Bros.* and *Carroll Towing*, it was wartime; the tugs that were engaged in drilling out the floats and that were responsible for re-securing and checking the tie lines had left; and the plaintiff's float shortly thereafter broke loose, while its attendant was absent, drifted downstream, and was damaged.⁶¹ The fact that on a barge, unlike a float, it was customary to keep a man aboard, for whom living quarters were provided, was not mentioned in *Carroll Towing* and (under the aggregate-risk-utility test) begs the legal question at issue: Was it negligent for the barge or float not to have a man on board at the time? In either case, the tug's responsibility for properly re-securing and checking the lines is not affected by the presence or absence of an attendant, and the owner of the barge or float presumably is entitled to assume that the tug will properly secure the lines.

The third and last case in which *Carroll Towing* was cited, *Rosenquist*

⁵⁹ *Id.* at 407-08.

⁶⁰ *Id.* at 408.

⁶¹ See *infra* Section I.D. The *New York Trap Rock* and *Burns Bros.* cases are discussed by Patrick Kelley as well, who also points out their inconsistency with the results and reasoning in *Carroll Towing*. Kelley, *supra* note 2, at 750-52.

v. Isthmian Steamship Co.,⁶² was decided in 1953. The relevant issue was whether a fellow seaman, Violente, had negligently contributed to the plaintiff's suffering a hernia when Violente dropped his end of an awkward, 200-pound bundle that the two of them were carrying.⁶³ The appellate panel consisted of the "first team," or "great triumvirate," of the Second Circuit: Learned Hand, Augustus Hand, and Thomas Swan, who had been colleagues and friends for over twenty-five years on the Second Circuit and had heard and decided over 1000 appellate cases together.⁶⁴ In an opinion by Judge Swan, the court held as a matter of law that Violente was not negligent:

To let his end drop to the floor, a distance of not more than three feet, was most unlikely to cause any injury to the plaintiff at the other end of the bundle. ... [T]he likelihood that this would put such a strain on the plaintiff as to result in injury seems to us too remote to require an ordinary seaman to anticipate it. ... Negligence may be measured as a product of the gravity of the injury, if it occurs, multiplied by the factor of its probability. [Citing, in a footnote, *United States v. Carroll Towing Co.*, 2 Cir., 159 F.2d 169, 173; *In re Spencer Kellog & Sons*, 2 Cir., 52 F.2d 129, 132, reversed on other grounds ... ; *The Silver Palm*, D.C.N.D.Cal., 13 F.Supp. 212, 215; *The John Carroll*, 2 Cir., 275 F. 302, 306 ("The care to be exercised must be in proportion to the danger to be avoided.")] The chance that any serious danger would happen from dropping Violente's end of the tarpaulin was substantially zero. Hence we cannot think that Violente was charged with any duty toward plaintiff to guard against letting slip his grip on the tarpaulin.⁶⁵

Rosenquist has been cited as a case that explicitly mentions Hand's aggregate-risk-utility formula.⁶⁶ However, although Swan cited *Carroll Towing*, he only mentioned the probability and gravity of injury, not the burden of precaution, and the relevant language in the *Spencer Kellog* and *Silverpalm* cases that he cited is like the language that he quoted from *The John Carroll*: "The degree of care exacted in any situation depends, not only upon the likelihood of injury, but on its gravity if it comes."⁶⁷ Similar language occasionally appears in jury instructions: "The

⁶² 205 F.2d 486 (2d Cir. 1953).

⁶³ *Id.* at 487-88.

⁶⁴ See Gunther, *supra* note 16, at 646-47; Smith, *supra* note 22, at 1657-58.

⁶⁵ 205 F.2d at 489, 489 n.3.

⁶⁶ See Nelson, *supra* note 11, at 218 & n.555; White, *supra* note 22, at 79 n.10.

⁶⁷ *In re Spencer Kellog & Sons*, 52 F.2d 129, 132 (2d Cir. 1931) (Hand, J.) (quoted in *The Silverpalm*, 13 F. Supp. 212, 215 (N.D. Cal. 1935)).

greater the danger/risk, the greater the degree/amount of care is required."⁶⁸ As others have noted,⁶⁹ these sorts of statements are not an endorsement of the aggregate-risk-utility test. Literally and as usually interpreted, they do not refer to the *burden* or *cost* of care, but rather to the *degree* or *amount* of care. They require an increased degree or amount of care as necessary to counteract the increased danger or risk, without making any reference to the burden or cost involved in providing the increased degree or amount of care. Thus, in his opinion in *Spencer Kellog*, Hand, noting the gravity of the harm that might result from the sinking of a crowded ship, declared that the chances of that occurring "must be ruled out, though remote," and that "nothing but the extremest precautions could exculpate anyone concerned in the venture, if even those will serve."⁷⁰

In the rest of this Part, I discuss, in chronological sequence, Learned Hand's four usually discussed "Hand formula" opinions and then briefly survey the other seven opinions in which he referred to the aggregate-risk-utility test.

B. *Gunnarson v. Robert Jacob, Inc.*

Hand first articulated the aggregate-risk-utility test, in its usual verbal rather than mathematical form, in 1938 in *Gunnarson v. Robert Jacob, Inc.*,⁷¹ in an opinion joined by his cousin Augustus and Judge Swan.⁷² Andrew Gunnarson was employed as the captain of the defendant's yacht. Andrew's son Arthur, who was not employed on the yacht but had come aboard to see Andrew, helped him bring a "protane" (propane) tank on board, install it in the galley, and attach it to the stove's fuel line. When Andrew subsequently lit a match in the galley, the match's flame ignited propane gas that had leaked from the tank as a result of Andrew's crossing the copper threads while using a wrench to install a "manifold" (stopper) on the tank. The resulting explosion killed Andrew and injured Arthur. Andrew's widow and Arthur brought "unseaworthiness" claims under federal admiralty law against the yacht's owner based on the placement of the propane tank in the galley.⁷³

Gunnarson is the admiralty equivalent of an on-land premises-liability

⁶⁸ See Kelley & Wendt, *supra* note 27, at 598, 605-06.

⁶⁹ See Gilles, *English Negligence Law*, *supra* note 11, at 503-04 n.38, 508; Gilles, *supra* note 6, at 1017-18 n.6.

⁷⁰ *In re Spencer Kellog & Sons*, 52 F.2d at 132.

⁷¹ 94 F.2d 170 (2d Cir. 1938).

⁷² *Id.* at 171.

⁷³ *Id.*

case. Indeed, the case dramatically illustrates the different standards of care applied to property owners with respect to risks to entrants on their property depending on the status of the entrant — a difference that is inconsistent with the aggregate-risk-utility test but consistent with the varying rights positions of the parties.⁷⁴ Making no reference to risks or utilities, Hand upheld the trial judge's dismissal of Arthur's claim on the ground that the defendant "owed him no duty of affirmative care" since, unlike Andrew, "[Arthur] was not an 'invited person,' or 'business visitor'" on the defendant's yacht.⁷⁵

However, Hand reversed the dismissal of the claim brought by Andrew's widow. Having previously noted that "[p]rotane gas is in common use both ashore and afloat, but it is highly explosive when mixed with two per cent of air or less; and for this reason extreme precautions are necessary to prevent its escape,"⁷⁶ he held that the defendant yacht owner was liable for having negligently caused Andrew's death:

[T]o say that such a tank was safest where it was put, is not to say that it was safe at all, and we do not think that it was, without more care on the owner's part. ... In such cases liability depends upon an equation in which the gravity of the harm, if it comes, multiplied into the chance of its occurrence, must be weighed against the expense, inconvenience and loss of providing against it. ... The chance that some one might be careless in installing the "manifold" was by no means impossible; indeed, without warning it was extremely probable, and it was a hazard against which provision should have been made. It was therefore essential to instruct Andrew Gunnarson that on no account must he allow the "manifold" to cut the copper threading, and to enforce obedience to that order, so far as was reasonably possible. Without warning he might well think it no great matter whether he used a wrench to screw down the "manifold." Considering the risk to which this exposed him, it was negligent to leave him to his own devices. We need not therefore say that the mere presence of the tank in the galley, where the gas might [leak and] flow to the stove, made the yacht unseaworthy; but we do say that if such a tank was to be used in such a place, the owner did so at his own peril, unless he gave and enforced the orders we have described. This was never done. Little need be added as to Andrew Gunnarson's contributory negligence. Negligent indeed he would have been, if he had known the danger,

⁷⁴ See Wright, *supra* note 6, at 265-66; *infra* Sections II.B., II.C.

⁷⁵ 94 F.2d at 171-72.

⁷⁶ *Id.* at 171.

but not as things were. The successful handling of such tanks in the past told him nothing, and he had no reason a priori to suppose that such a trifling cause would have such grievous consequences.⁷⁷

Hand verbally stated his aggregate-risk-utility formula for determining negligence, but did he apply it? Setting aside his failure to attempt to use the formula to explain or justify the lack of any duty of care owed to Arthur, does the formula explain the finding that the yacht owner was negligent but Andrew was not? Hand apparently assumed that the yacht owner, but not Andrew, was aware or should have been aware of propane's dangerous nature. Yet no evidence is cited in support of that assumption, and it seems much more plausible to assume that Andrew, who was "an experienced yacht master and had installed several propane tanks before,"⁷⁸ was or should have been more knowledgeable about propane's dangerous nature than the (idle rich?) defendant yacht owner. Moreover, if a warning and order had been given by the yacht owner, it is hard to imagine what more he could have done to enforce the order, other than keeping a very burdensome constant watch on Andrew; yet in the passage quoted above, Hand asserts, without undertaking any balancing of the burden against the risks, that the owner acted at his peril unless he not only gave but also enforced the warning order. Between the two, Andrew clearly seems to have been the "cheapest cost avoider" with respect to acquiring knowledge of propane's hazardous nature and properly handling propane tanks.⁷⁹

Even though under admiralty law Andrew's contributory negligence would only have reduced his recovery rather than being a complete defense, the *Gunnarson* court obviously was influenced by the different statuses of the yacht owner and Andrew as defendant and plaintiff, respectively. Hand used a (too?) strict objective perspective when assessing the defendant's alleged negligence and a (too?) lenient subjective perspective when assessing the plaintiff's alleged negligence. This difference in perspective is impossible

⁷⁷ *Id.* at 172.

⁷⁸ *Id.* at 171.

⁷⁹ After stating the aggregate-risk-utility formula, Hand noted that "[t]he harm may be so great as to impose an absolute [strict] liability regardless of any negligence." *Id.* at 172. However, strict liability for the adverse consequences of ultrahazardous activities will not apply in favor of willing participants in such activities, who must rather recover through a negligence action or not at all. See Keeton et al., *supra* note 2, § 79, at 563. The legal economists' attempts to explain strict liability for ultrahazardous activities assume a helpless plaintiff who is unable to affect the probability of injury, which is generally not the case and certainly not the case here. See, e.g., Posner, *Economic Analysis*, *supra* note 23, at 194-95.

to explain or justify under the efficiency theory's impartiality-of-interest assumption, but does make sense under an approach that takes into account the respective rights positions of defendants and plaintiffs.⁸⁰

In sum, the actual results in *Gunnarson* cannot be explained by Hand's aggregate-risk-utility formula. He instead takes into account the relationships among and respective rights of the parties by applying very different criteria of reasonable care to a defendant property owner (the ship owner) putting an employee-invitee (Andrew) at risk, a defendant property owner putting an uninvited entrant on his property (Arthur) at risk, and a plaintiff employee-invitee (Andrew) putting himself at risk.

C. *Conway v. O'Brien*

Two years later, in 1940, in his opinion for the court in *Conway v. O'Brien*,⁸¹ which was joined again by his cousin Augustus and by Judge Robert Patterson in place of Judge Swan,⁸² Hand once more set forth an aggregate-risk-utility test for determining negligence, albeit in a less explicit version that merely mentioned "balancing" the relevant factors. Moreover, he immediately noted the practical impossibility of attempting to apply the test and stated that, instead, the issue of reasonable care should be left for the jury to decide based on "commonly accepted standards":

The degree of care demanded of a person by an occasion is the resultant of three factors: the likelihood that his conduct will injure others, taken with the seriousness of the injury if it happens, and balanced against the interest which he must sacrifice to avoid the risk. All these are practically not susceptible of any quantitative estimate, and the second two are generally not so, even theoretically. For this reason a solution always involves some preference, or choice between incommensurables, and it is consigned to a jury because their decision is thought most likely to accord with commonly accepted standards, real or fancied.⁸³

As we previously noted, the community's "commonly accepted standards" do not include the basic utilitarian-efficiency norm — maximizing the sum

⁸⁰ See Wright, *supra* note 14, at 466-82; Wright, *supra* note 6, at 257-59.

⁸¹ 111 F.2d 611 (2d Cir. 1940).

⁸² *Id.*

⁸³ *Id.* at 612.

of impartially considered individual interests — that underlies the aggregate-risk-utility test, but rather include prominently among the admittedly relevant "incommensurables" the relationships among and respective rights of the affected parties, which are irrelevant under the aggregate-risk-utility test.⁸⁴ This is evident in the opinions by the circuit court and the Supreme Court in the *Conway* case.

The plaintiff, Ms. Conway, was a passenger in the defendant O'Brien's car who was injured when his car ran into another car that had just exited from a one-lane covered bridge. O'Brien, who was going fifteen m.p.h. around a sharp, blind left turn just before the bridge, had "cut the corner" by crossing over into the oncoming traffic lane without honking his horn. Under the "guest occupant" law then in force in Vermont and many other states, Conway, as a nonpaying guest passenger in O'Brien's car, had to establish "gross" or "willful" negligence by O'Brien in order to hold him liable for her injury.⁸⁵ Interestingly, this situation is analogous to the land-occupier and boat-owner cases involving on-premises risks to entrants on the defendant's property — the property in this case being the defendant's car — with different standards of care once again being applicable depending on the status of the plaintiff entrant.

The jury found the defendant liable. Hand reversed, holding as a matter of law that O'Brien had not been grossly or willfully negligent. Immediately following the passage quoted above, which set forth and then abandoned the aggregate-risk-utility test for ordinary negligence, the proper test for "gross" or "willful" negligence under the guest passenger statute was considered by Hand:

A statute like that before us presupposes that the answer to the general question has been against the defendant (that is, that his conduct has been inexcusable) but it imposes upon his liability a condition which cannot even be described in quantitative terms; not only must the interest which he would have had to sacrifice be less than the risk to which he subjects others, but it must so far fail to match that risk that some opprobrium or reproach attaches to him. In *Powers v. Wilson*, 2 Cir., 110 F.2d 960, we had this statute before us, and thought this the most satisfactory approach to the solution of a problem, essentially self-contradictory, since it professes to set a quantitative standard for the measurement of incommensurable factors. The leading case in Vermont is *Shaw v. Moore*, 104 Vt. 529,

⁸⁴ See *supra* text accompanying notes 4-9.

⁸⁵ 111 F.2d at 611-12.

162 A. 373, 374, 86 A.L.R. 1139, the opinion in which has been often cited; the definition there given contains such descriptive phrases as "more culpable than ordinary negligence", "utter forgetfulness of legal obligations"; "heedless and palpable violation * * * respecting the rights of others"; "short of being such reckless disregard * * * as is equivalent to a willful and intentional wrong"; "culpability which characterizes all negligence * * * magnified to a high degree"... . At times the court has been content merely with another phrase from *Shaw v. Moore*, *supra*, "failure to exercise even a slight degree of care". All these are indeed formally quantitative and probably that is unavoidable, but since no common measure is strictly possible, we think that our gloss is a fair one.⁸⁶

This passage is confusing, if not incomprehensible. Contrary to Hand's statement, the quoted tests or interpretations of gross or willful negligence from the leading Vermont case, *Shaw v. Moore*, are not "formally quantitative," but rather are expressly qualitative, focusing on culpability for "utter forgetfulness of legal obligations [to others]" and "heedless and palpable violation [of the] rights of others," including situations in which there has been a "failure to exercise even a slight degree of care." There is nothing remotely close to an aggregate-risk-utility test in these statements from *Shaw*. Hand's "gloss," on the other hand, which he describes as "the most satisfactory approach," is the "formally quantitative" interpretation that is "essentially self-contradictory, since it professes to set a quantitative standard for the measurement of incommensurable factors." He expounded a gross-disparity-of-risk-and-utility test: "not only must the interest which he would have had to sacrifice be less than the risk to which he subjects others, but it must so far fail to match that risk that some opprobrium or reproach attaches to him."⁸⁷

Turning to consideration of "how loudly O'Brien's conduct cries for censure,"⁸⁸ Hand stated:

It is of course always careless to drive on the wrong side of the road on a curve, where one cannot see ahead; it is careless to do so even at so low a speed as fifteen miles; another car may be coming fast, and a collision may be inescapable. But few who have driven a motor [car], do not at times take the chance, when going slowly on

⁸⁶ *Id.* at 612.

⁸⁷ See *supra* text accompanying note 86.

⁸⁸ 111 F.2d at 612.

a back country road; most of us rely more than we should upon our alertness to become aware of, and our deftness to avert, oncoming danger; we should not, but we do; and in the hierarchy of guilt such carelessness does not stand high. O'Brien conceded that he knew the spot well and that it ought to be taken at a "snail's pace" if another car was coming; what he did was to assume the risk, and it was not a great one. Nor was he so totally without excuse as in other situations which themselves would be border-line — a car climbing a hill on the wrong side, for example, which has no reason not to keep to the right; O'Brien was in a position where it saved him trouble to cut the curve. Had he been driving twice as fast, or on a much travelled highway, we might think otherwise; but on that road and at that speed it seems to us that his fault was only a routine dereliction, not grave enough to fall within the statute.⁸⁹

While Hand described the risk created by the defendant as "not a great one" and was willing to take into account the purely personal benefit to the defendant that it "saved him trouble to cut the curve," he once again did not engage in any quantification or even rough assessment of the magnitude of the risk or the utility, much less any balancing or comparison of one against the other. He seems rather to have been greatly influenced by the fact that people often cut corners, especially on lightly traveled back-country roads. He had previously noted, "Only five or six families lived on the road, and the wheel tracks at the turn showed that it had been the custom to take it on the left side in order to make the turn more easily."⁹⁰ However, as Hand himself had previously famously noted,⁹¹ custom or common practice does not define the standard of reasonable care, especially in situations such as *Conway* in which a defendant is putting others at significant risk for the defendant's own private benefit. In such situations, the private benefit sought by the defendant (e.g., O'Brien's saving himself a few feet of driving by cutting the corner), if considered at all, is usually counted against the defendant rather than as a possible justification or excuse for his putting others at significant risk.⁹²

The U.S. Supreme Court reversed the Second Circuit's decision.⁹³ Posner claims that the Supreme Court reversed the Second Circuit "on

89 *Id.* at 613.

90 *Id.* at 612.

91 See *The T.J. Hooper*, 60 F.2d 737, 740 (2d. Cir. 1932); see *infra* note 114.

92 See *supra* text accompanying note 6 and *infra* Section II.F.

93 *Conway v. O'Brien*, 312 U.S. 492 (1941).

other grounds" not related to Hand's espousal or purported application of the disproportionate-risk-utility test for gross negligence.⁹⁴ However, the Supreme Court clearly did not accept Hand's "gloss" on gross negligence. Instead, it emphasized and quoted the qualitative culpability language in the "accepted Vermont definition of gross negligence ... found in *Shaw v. Moore*"⁹⁵ that Hand had set aside in favor of his disproportionate-risk-utility "gloss." Noting that "[t]he 'Law of the Road' in Vermont is to round curves 'as far to the right ... as reasonably practicable' and to 'signal with bell or horn' 'in going around a curve,'"⁹⁶ the Supreme Court concluded,

As a matter of law it seems quite plain that a jury might find a driver of a car familiar with the locality grossly negligent, when with three guests and without a signal he rounds a blind, sharp curve at fifteen miles per hour on the wrong side into a narrow bridge entrance.⁹⁷

D. *United States v. Carroll Towing Co.*

The aggregate-risk-utility test received its most famous exposition in Hand's 1947 opinion in *United States v. Carroll Towing Co.*⁹⁸ The defendant tug operator's negligent re-tying of the plaintiff's barge to a pier while shifting other barges around resulted in the barge's breaking loose and drifting into a tanker. The tanker's propeller broke a hole in the barge near its bottom, causing it to sink. The relevant issue was whether the absence of the plaintiff's bargee from the barge constituted contributory negligence.⁹⁹ Hand, joined this time by Judges Harrie Chase and Jerome Frank,¹⁰⁰ stated that the plaintiff could not be held responsible for the "collision" damages, since the bargee could not have controlled the defendant's employees' re-tying of the lines and thus could not have prevented its breaking loose and drifting into the tanker even if he had been aboard. However, Hand stated that the plaintiff could be held responsible for the "sinking" damages, since had the bargee been aboard, he should have noticed the hole in the barge in time to prevent its sinking.¹⁰¹

94 See, e.g., *McCarty v. Pheasant Run, Inc.*, 826 F.2d 1554, 1557 (7th Cir. 1987) (Posner, J.); Landes & Posner, *supra* note 4, at 151 n.6, 159 n.11, 249 n.44.

95 312 U.S. at 494-95.

96 *Id.* at 494 (footnotes omitted).

97 *Id.*

98 159 F.2d 169 (2d Cir. 1947).

99 *Id.* at 170-72.

100 *Id.* at 170.

101 *Id.* at 172.

Focusing on the reasonableness of the bargee's absence from the barge, Hand stated the now famous mathematical version of his aggregate-risk-utility formula and purported to apply it:

Since there are occasions when every vessel will break from her moorings, and since, if she does, she becomes a menace to those about her; the owner's duty, as in other similar situations, to provide against resulting injuries is a function of three variables: (1) The probability that she will break away; (2) the gravity of the resulting injury, if she does; (3) the burden of adequate precautions. Possibly it serves to bring this notion into relief to state it in algebraic terms: if the probability be called P ; the injury, L ; and the burden, B ; liability depends upon whether B is less than L multiplied by P : i.e., whether $B < PL$. Applied to the situation at bar, the likelihood that a barge will break from her fasts and the damage she will do, vary with the place and time; for example, if a storm threatens, the danger is greater; so it is, if she is in a crowded harbor where moored barges are constantly being shifted about. On the other hand, the barge must not be the bargee's prison, even though he lives aboard; he must go ashore at times. We need not say whether, even in such crowded waters as New York Harbor a bargee must be aboard at night at all; it may be that the custom is otherwise ... and that, if so, the situation is one where custom should control. We leave that question open; but we hold that it is not in all cases a sufficient answer to a bargee's absence without excuse, during working hours, that he has properly made fast his barge to a pier, when he leaves her. In the case at bar the bargee left at five o'clock in the afternoon of January 3rd, and the flotilla broke away at about two o'clock in the afternoon of the following day, twenty-one hours afterwards. The bargee had been away all the time, and we hold that his fabricated story was affirmative evidence that he had no excuse for his absence. At the locus in quo — especially during the short January days and in the full tide of war activity — barges were being constantly "drilled" in and out. Certainly it was not beyond reasonable expectation that, with the inevitable haste and bustle, the work might not be done with adequate care. In such circumstances we hold — and it is all that we do hold — that it was a fair requirement that the Conners Company should have a bargee aboard (unless he had some excuse for his absence), during the working hours of daylight.¹⁰²

¹⁰² *Id.* at 173-74.

Once again, Hand did not come close to actually applying his formula. He did not attempt to quantify P, L, or B. His assessment of P and L went no further than his statement that the danger ("the likelihood that a barge will break from her fasts and the damage she will do") is "greater" in "a crowded harbor where moored barges are constantly being shifted about" or "if a storm threatens." His focus on the risks of the barge's causing damage to other vessels or property seems misguided, given his prior holding that the plaintiff could not have controlled or overridden the defendant's employees' retying of the barge and thus could only be held contributorily negligent for the sinking damages, not for the barge's breaking loose or the resulting collision damages. Moreover, he made no attempt to specify how large or small the risk actually had been in this case. As for the burden of precaution, Hand merely cryptically stated, "[T]he barge must not be the bargee's prison ... he must go ashore at times." This tells us very little about the extent of the burden, while simultaneously both overstating it and understating it. On the one hand, a twenty-four-hour bargee presence on the barge could be maintained, while letting bargees go ashore as often as seems desirable by hiring bargees in shifts. On the other hand, if the duty to have a bargee on board exists for this barge, it apparently exists for *every* barge in the harbor, including each barge tied up in the same string as the plaintiff's barge that broke loose along with the plaintiff's barge.

In any event, Hand never compared the danger or risk, whatever it might be, with the burden, whatever that might be. Rather, as Hand himself emphasized, the defendant was found negligent only because his bargee had no excuse (or only a "fabricated" one) for his absence. The defendant was required to have a bargee on board "*unless* [the bargee] had some excuse for his absence."¹⁰³ Apparently, contrary to Hand's formula, any (non-fabricated) excuse would have prevented the defendant from being found negligent, no matter how great the danger or risk (P times L) of the barge's breaking loose or how minimal the excuse (B). The Hand formula "explains" the result only on the assumption that B (the utility of the bargee's absence) was zero, so that *any* risk (no matter how slight) results in a finding of negligence. However, the assumption of zero utility is implausible. The causally relevant alleged negligence was the bargee's absence for the brief period during which the barge almost immediately broke loose after being re-tied and drifted into the tanker, not the bargee's absence during the prior twenty-one hours¹⁰⁴ (just as, for an auto accident, the causally relevant alleged negligence is the

103 *Id.* (emphasis added); see *supra* text accompanying note 102.

104 Patrick Kelley makes a similar point. Kelley, *supra* note 2, at 741-42.

defendant's speeding immediately prior to the accident, not her speeding for the prior several hours). Any number of excuses might exist for the bargee's being absent during that short period — e.g., having a late lunch, going to the bathroom, shopping for supplies, or even (from the utilitarian-efficiency viewpoint) meeting his girlfriend, gambling, and/or having a drink at a bar.

Hand's holding, limiting the finding of the defendant's contributory negligence to situations in which the bargee had *no* excuse for his absence, is not supportable under his aggregate-risk-utility formula. It is supportable under the justice theory, which takes into account the respective rights of the parties and thus holds that one ordinarily is not required to subject oneself to significant burdens or diminutions in one's rights in order to protect one's person or property against possible tortious conduct by others.¹⁰⁵ As we previously noted, contemporaneous Second Circuit cases with very similar facts distinguished *Carroll Towing*, did not mention its aggregate-risk-utility test and held that the failure to have an attendant on board was not negligent.¹⁰⁶

E. *Moisan v. Loftus*

Hand's final reference to his aggregate-risk-utility formula occurred two years after *Carroll Towing*, in 1949, in *Moisan v. Loftus*.¹⁰⁷ In an opinion joined by Judges Frank and Swan,¹⁰⁸ he once again discussed a defendant's liability under Vermont's guest passenger statute, an issue that he had addressed (unsuccessfully) nine years earlier in the *Conway* case.¹⁰⁹ In *Moisan*, the defendant Loftus was driving his truck near midnight at a speed of over fifty m.p.h. along a straight stretch of road close to Lake Champlain. Although there was no other traffic in sight, he had his low light beams on. It was a windy night in early April, with a temperature "very close to freezing." At one point the lake's waters, "for some unexplained reason," had overflowed the road and frozen. Loftus noticed the ice patch when he was only 200 or 300 feet away, but mistook it for water until the truck reached the patch. He applied his brakes hard, causing the truck to skid, leave the road, strike a tree, and turn over. The plaintiff, who was a nonpaying guest passenger in Loftus's truck, was injured. Hand's opinion

¹⁰⁵ See *infra* Section II.G.

¹⁰⁶ See *supra* text accompanying notes 55-61.

¹⁰⁷ 178 F.2d 148 (2d Cir. 1949).

¹⁰⁸ *Id.*

¹⁰⁹ See *supra* Section I.C.

affirmed the district court's direction of a verdict in favor of the defendant.¹¹⁰ Hand explained:

The Supreme Court of Vermont has several times accepted as the authoritative definition of "gross" negligence what was said in *Shaw v. Moore*, which the Supreme Court of the United States quoted in *Conway v. O'Brien*. ... The difficulties are in applying the rule, as the Supreme Court observed in *Conway v. O'Brien*, *supra*; they arise from the necessity of applying a quantitative test to an incommensurable subject-matter; and the same difficulties inhere in the concept of "ordinary" negligence. It is indeed possible to state an equation for negligence in the form, $C = P \times D$, in which the C is the care required to avoid risk, D , the possible injuries, and P , the probability that the injuries will occur, if the requisite care is not taken. But of these factors care is the only one ever susceptible of quantitative estimate, and often that is not. The injuries are always a variable within limits, which do not admit of even approximate ascertainment; and, although probability might theoretically be estimated, if any statistics were available, they never are; and, besides, probability varies with the severity of the injuries. It follows that all such attempts are illusory; and, if serviceable at all, are so only to center attention upon which one of the factors may be determinative in any given situation. It assists us here to center on the factor of probability, because the difference between "gross" and "ordinary" negligence consists in the higher risks which the putatively wrongful conduct has imposed upon the injured person. The requisite care to avoid the injuries and the possible injuries themselves are the same.

Confining ourselves therefore to the factor of probability, it appears to us that the chance that the truck would leave the road that night was slight. We will assume that a jury might find it negligent to drive at over fifty miles an hour in the night even on a straight road on which there was nothing ahead; it is always possible that the way may not be as open as it appears, and lights in "low beam" of course cut down the distance one can see ahead. Nevertheless if that be negligence, it is negligence of which most drivers, and especially skilled drivers, are often guilty. The speed has become nearly the standard on straight stretches of road in the daytime, and confident drivers do not hesitate to reach it at night. The time was early April when hard frosts have

¹¹⁰ 178 F.2d at 148-49.

become uncommon, and the testimony went no further than to say that the temperature was "very close to the freezing point." Even if it was careless — which we question — not to apprehend that what looked like water might be frozen, it was at least not reckless to think that it would be water. The most that we can see in the evidence is the kind of carelessness which all of us fall into every day, and which does not condemn those guilty of it in the somewhat rhetorically condemnatory terms of the accepted definition. ...

... When we compare the situation which was "gross" negligence in *Conway v. O'Brien*, *supra*, with that at bar, we are aware that the factor of probability in each may conceivably be regarded as not far apart; all we can say is that the difference does seem to be enough to put the two cases in separate classes. Perhaps that is all that it is ever possible to say in such cases.¹¹¹

As in the three previously discussed cases, in *Moisan* there is no application of the Hand formula, as Hand himself admits. He makes no attempt to quantify or even rank P, L [D], or B [C], much less compare the risk with the burden of precaution. He focuses only on P, claiming that "[t]he requisite care to avoid the injuries and the possible injuries themselves are the same" whether we are discussing ordinary negligence or gross negligence. Yet, under his formula, assessments of gross versus ordinary negligence should take into account not only the probability of injury (P), but also the extent to which the care taken by the defendant diverged from the proper amount or level of care (B) and the fact that the severity of injury (L) as well as the probability of injury (P) usually both increase as the divergence between the actual level of care and the (greater) proper level of care (B) increases. In *Moisan*, the alleged negligence presumably included the defendant's driving so fast (for 1949) in the dead of night with the truck's lights on low beam, his failing to foresee that water from the lake or elsewhere might be on the lakeside road and possibly freeze since the temperature was "very close to freezing," and his hard application of the brakes (contrary to all safe driving instructions) once the truck hit the ice patch. The probability of an accident like the one that occurred given all of these acts and omissions would seem to be more than "slight," whereas the burdens of using the high beams, slowing temporarily when the water/ice patch was seen, and avoiding hard braking on the ice patch would all seem to be slight.

As in *Conway*, Hand relies on common or ordinary practice rather than on

111 *Id.* at 149-50 (footnotes omitted).

any aggregate-risk-utility test; indeed, he puts so much weight on common practice that he indicates doubts as to whether the defendant was negligent at all. Yet Hand's conclusion that a jury could not reasonably find that the defendant had been *grossly* negligent is probably correct, for the reasons that Hand gives, which have nothing to do with the Hand formula, but, instead, with the fact that all the alleged negligent acts and omissions, separately and combined, are "the kind of carelessness which all of us fall into every day, and which does not condemn those guilty of it in the somewhat rhetorically condemnatory terms of the accepted [*Shaw v. Moore*] definition." As we have seen, the accepted *Shaw v. Moore* definition is not Hand's quantitative disproportionate-risk-utility test, but rather a qualitative rights-based definition that focuses on whether the defendant's conduct evidenced a serious disregard for others' rights in their persons and property.¹¹²

F. Hand's Other "Hand Formula" Opinions

In none of the four cases discussed above did Hand actually apply, or even attempt to apply, his aggregate-risk-utility formula. Indeed, he explicitly stated the impossibility of ever actually applying the test, stating instead that resolution of the negligent-conduct issue "always involves some preference, or choice between incommensurables, and it is consigned to a jury because their decision is thought most likely to accord with commonly accepted standards, real or fancied."¹¹³ His actual analyses in these cases explicitly or implicitly relied on common expectations and practices (without, however, making common practice determinative)¹¹⁴ and on the relationships among and respective rights of the parties.

In one of the other seven cases in which Hand referred to risk-utility

¹¹² See *supra* text accompanying notes 86-97.

¹¹³ See *supra* text accompanying note 83.

¹¹⁴ Hand famously held that customary practices do not determine the standard of reasonable care. See *The T.J. Hooper*, 60 F.2d 737, 740 (2d Cir. 1932); *Santomarco v. United States*, 277 F.2d 255, 257 (2d Cir. 1960):

Although it is customary to say that negligence is a question of fact, it always involves an appraisal of values, and while ordinarily values are to be appraised by the standard commonly accepted in the circumstances, that is not their inevitable measure. ... "What usually is done may be evidence of what ought to be done, but what ought to be done is fixed by a standard of reasonable prudence, whether it usually is complied with or not." *Holmes, J., Texas & Pacific Railway Co. v. Behymer*, 189 U.S. 468, 470, 23 S.Ct. 622, 623, 47 L.Ed. 905. "Ordinary care, then * * * implies the exercise of reasonable diligence,

balancing, a 1944 labor law case, *Republic Aviation Corp. v. N.L.R.B.*,¹¹⁵ Hand explicitly stated (in *dicta*) that the negligence issue ultimately turns on what seems just, rather than a literal balancing of risks and utilities:

The question [on appeal] is what is often called a "mixed question of law and fact"; and it is true that it comprises, or should comprise, two quite different determinations: (1.) what in fact will be the prejudice to the interests of the employer in allowing electioneering to go on during lunch hours, and what will be the benefit to the employees; and what will be his benefit and their prejudice in disallowing it; (2.) whether the benefits shall prevail over the prejudice, or vice versa. The language of § 8 is too indefinite to allow the tribunal which enforces it to avoid the second of these inquiries; it is the same question that often arises in the law of torts: e.g. negligence, trade-marks, unfair trade, indeed all questions which depend on what conduct is "reasonable." In all these cases the court balances the interests against each other, and awards priority as seems to it just.¹¹⁶

At the very least, "award[ing] priority as seems to it just" indicates a different rather than an equal weighting of the interests' being "balanced," based on justice considerations, and thus a departure from the equal weighting called for by the utilitarian-efficiency impartiality principle. Moreover, the reference to "priority" and the grammatical structure of Hand's statement indicate an absolute priority for the justice considerations, after the nature of and effects on the relevant interests have been considered ("balanced").

In the remaining six "Hand formula" opinions, the references to risk-utility balancing range from offhand *dicta* to purported balancings of risks against the burdens of precaution. However, as in the better-known cases, no actual balancing of risks against utilities or burdens is ever

and reasonable diligence implies, as between the employer and employe, such watchfulness, caution, and foresight as, under all the circumstances of the particular service, a corporation controlled by careful, prudent officers ought to exercise." *Wabash Railway Co. v. McDaniels*, 107 U.S. 454, 460, 2 S.Ct. 932, 938, 27 L.Ed. 605; *S. H. Kress & Co. v. Telford*, 5 Cir., 240 F.2d 70, 73; *The T. J. Hooper*, 2 Cir., 60 F.2d 737, 740.

¹¹⁵ 142 F.2d 193 (2d Cir. 1944).

¹¹⁶ *Id.* at 196. Professor Warren Seavey, an adviser for both the first and second Restatements, was even more explicit in rejecting any literal balancing of aggregate risks and utilities and in insisting that the reasonableness of conduct depends on considerations of rights and justice and varies depending on who is putting whom at risk for whose benefit. Warren A. Seavey, *Negligence — Subjective or Objective?*, 41 Harv. L. Rev. 1, 3, 8 n.7, 10, 12 (discussed in Wright, *supra* note 1, at 151-52).

undertaken. Rather, in each case, Hand "awarded priority" to one or the other of the incommensurable affected interests, after taking into account the relationships among the parties and the nature of the interests.

In a 1943 case, *Stornelli v. U.S. Gypsum Co.*,¹¹⁷ which involved possible liability under New York's Labor Law, Hand contrasted the strict nature of liability for failure to conform with particularized statutory safety requirements with the exercise of judgment required by negligence law's non-particularized standard of reasonable care. The latter, he declared, "involves a matching of human interests: it is 'legislation' in parvo." Referring to another case to illustrate this point, he awkwardly appended *dicta* regarding the aggregate-risk-utility interpretation of "reasonable care":

The distinction is well illustrated by *Teller v. Prospect Heights Hospital*, 280 N.Y. 456, 21 N.E.2d 504, 505, in which the court dismissed the complaint as insufficient in law on its face. It had alleged that the employee had been injured through the employer's failure "to provide anchors" on the frames of windows which he had to clean; but it did not allege that "reasonable care" required these to be installed. Hence it was bad as a declaration at common-law, just because it did not invoke a standard measured by balancing the cost of prevention against the risk to the sufferer.¹¹⁸

In another 1943 case, *Sidney Blumenthal & Co. v. Atlantic Coast Line Railroad Co.*,¹¹⁹ the plaintiff's goods were lost when the defendant's tug set forth with cargo in tow despite storm warnings of which the defendant should have been aware.¹²⁰ Hand stated that the risks should be "matched against" the burden of precaution, but once again he ultimately relied on "commonly accepted standards"¹²¹ — evidenced, in this instance, by the actions of other carriers on the particular occasion — rather than on any actual balancing of the risks against the burden of precaution:

In all actions for negligence the decision depends upon the risk imposed upon the person who eventually suffers, matched against the prejudice or expense necessary to avoid it. In this case that prejudice and that expense were no more than the delay of a few hours; on the other hand the risk was most substantial. We should indeed have been

¹¹⁷ 134 F.2d 461 (2d Cir. 1943).

¹¹⁸ *Id.* at 463.

¹¹⁹ 139 F.2d 288 (2d Cir. 1943).

¹²⁰ *Id.* at 289-90.

¹²¹ See *supra* text accompanying note 113.

influenced to an opposite conclusion, had the experienced watermen who manned the tug accepted the risk with full knowledge of all the facts; but they were never advised [by the defendant], and we have no reason to suppose that we are pitting our judgment against theirs. Indeed there were other watermen in the harbor who withdrew all their shipping that afternoon.¹²²

A 1945 case, *Waldie v. Steers Sand & Gravel Corp.*,¹²³ involved liability for damage suffered by a barge when it grounded at low tide in its berth at a wharf. Hand mentioned risk-utility balancing, but employed arguments about reasonable reliance to distinguish the obligations of different parties to be aware of and provide warnings about the subsurface conditions at the wharf:

[W]e have often held or implied, that the liability of wharfingers, consignees, or tugs, is to exercise "reasonable care," and is to be determined in each situation by balancing the risks imposed upon others by not taking precautions against the cost and trouble of the precautions. In short we have treated the situation as an ordinary case of "negligence." ... [T]he reputation of a wharf may excuse a consignee, and a fortiori a tug, though it would not excuse a wharfinger. A wharfinger invites vessels to use his wharf and induces them to suppose that all berths are safe: if he has not exercised care to see that they are, he exposes them to a risk which they have no reason to anticipate. A consignee also invites a barge to use the wharf, when he asks it to deliver goods there; and if he has been using it for a long time, his invitation may induce as much reliance as a wharfinger's, though not if he is using the wharf for that single occasion; the degree of precaution expected of him may well be deemed to depend upon the permanency of his use. But a tug will rarely, if ever, be in this position; she must ply her trade all over the harbor, and there is ordinarily no warrant, either in principle or authority, for requiring her to sound at each wharf where she delivers a barge. She is indeed to be held for such information as is current in the calling; and if the wharf has a bad name, she should know it; that would be a factor in establishing her liability.¹²⁴

In another 1945 case, *Barbarino v. Stanhope Steamship Co.*,¹²⁵ the relevant

¹²² 139 F.2d at 291.

¹²³ 151 F.2d 129 (2d Cir. 1945).

¹²⁴ *Id.* at 130-31 (citations omitted).

¹²⁵ 151 F.2d 553 (2d Cir. 1945).

issue was whether the stevedore for whom the plaintiff worked had been negligent in not warning him and others to stay clear of a boom as it was being raised during the cargo-loading operations. After stating that "to fix any standard of care two conflicting interests must be always appraised and balanced: that of the person to be protected, and that of the person whose activity must be curtailed," and noting, "in the end no decision can be reached except by choosing between two human interests, one of which must be sacrificed,"¹²⁶ Hand held that the stevedore may have been negligent and remanded for further consideration:

It was possible to avoid all danger at that time by merely warning the men to get out of the way. It is true that it was most uncommon for a boom to fall [the only witnesses on this point said they "had never heard of its happening" or that it was "very uncommon"]; but it was not unknown, and it would not have delayed the work for more than a few seconds to give the necessary warning and to see that it was obeyed. Considering that if it did fall, the men would be most gravely injured or killed, we cannot excuse the failure to protect them by so simple a means. However, we will not hold the stevedore liable upon this record. The point which we are deciding was not very fully developed; and other evidence may come out at the new trial, which will put a new face upon it. We will merely reverse the decree exonerating the stevedore and remand the case for a new trial ...¹²⁷

In a 1946 case, *McGhee v. United States*,¹²⁸ one of the alleged negligent omissions by the defendant ship operator was its failure, prior to the ship's setting out from Glasgow on a trans-Atlantic voyage during wartime, to inspect the ship's steel plates, which cracked apart causing the ship to sink. The plaintiff alleged that the plates had been weakened during immediately preceding voyages by bombings and a violent shaking of the ship in a storm that had required repair of its steering gear.¹²⁹ Hand held:

As to the [failure to inspect] we think that the conditions then existing made it reasonable to impose upon vessels the hazards involved, when no damage [from the prior incidents] was apparent. The port of Glasgow was so crowded that the [ship] had to lie five miles away, and be docked for only a short time. Despatch was of the utmost urgency,

¹²⁶ *Id.* at 555.

¹²⁷ *Id.* at 555-56.

¹²⁸ 154 F.2d 101 (2d Cir. 1946).

¹²⁹ *Id.* at 102-03.

and if despatch meant taking some chances, chances must be taken. The standard of care in any situation is determined by balancing the risk against the cost of precaution. In the end that always demands a choice between values, and the most vital national interests precluded precautions that might have been proper, if less had been at stake.¹³⁰

Finally, in a 1948 case, *Red Star Barge Line v. The Russell No. 7*,¹³¹ Augustus Hand held that the placing of the plaintiff's scow in a berth by the defendant's tug, despite the protests of the scow's bargee that the heavily loaded scow would ground in that berth at low tide, had been negligent since no boat had previously grounded in that berth and since the bargee had not warned of any uneven or rocky subsurface conditions.¹³² Learned Hand dissented. He argued that the protest by the bargee had been a sufficient warning that the barge was likely to be injured through grounding and that the tug master's placing the scow in the berth despite the bargee's protest was negligent:

Whenever any one exposes the property of another to the risk of damage and damage ensues, I take it he must show that he had an interest to protect which matched the risk he imposed. On his own testimony, the tug master could have put the barge in the southern tier where there were "two or three barges," and, although he said that it was not the custom to do this, certainly that did not excuse him. Again, although the Fowler, which lay outside the [plaintiff's scow], was also loaded the tug master did not inquire whether the Fowler's bargee would have protested at being put inside the [plaintiff's scow, in the berth at issue]. So I can find no interest of the tug for making the shift which matched the risk that, as I believe, she imposed upon the scow.¹³³

II. PROFESSOR RICHARD POSNER

A. The "Hand Formula" and Nineteenth-Century Negligence Law

Posner's initial publication on the topic of negligence was his 1972 article *A Theory of Negligence*,¹³⁴ in which he discussed the results of his analysis of a sample of American appellate decisions in accident

¹³⁰ *Id.* at 105.

¹³¹ 168 F.2d 717 (2d Cir. 1948).

¹³² *Id.* at 718.

¹³³ *Id.* at 719.

¹³⁴ Posner, *Theory of Negligence*, *supra* note 23.

cases reported between 1875 and 1905.¹³⁵ He asserted that "the rules of liability [during this period] seem to have been broadly designed to bring about the efficient (cost-justified) level of accidents and safety or, more likely, an approximation thereto"¹³⁶ and that "Judge Learned Hand's famous formulation of the negligence standard" is "the essential clue" to all the various rules and doctrines of late-nineteenth-century negligence liability: "Although [Hand's] formulation postdates [this period], it never purported to be original but was an attempt to make explicit the standard that the courts had long applied. ... Hand was adumbrating, perhaps unwittingly, an economic meaning of negligence."¹³⁷

However, Posner did not cite or discuss the facts of any particular case. He only discussed non-workplace-injury cases involving railroads, street railways, or defective roadways or sidewalks (58% of the non-workplace-injury cases),¹³⁸ and even for these few categories of cases, he deployed overbroad generalizations, unsupported and even implausible assumptions, and conclusory statements regarding rationales and aggregate risk-utility. For example, to explain why only compensatory and not punitive damages are available for injuries caused by ordinary or gross negligence, even though efficiency theory would apply a "punitive" multiple to the actual damages that is inversely proportional to the probability of the tortfeasor's being identified and successfully sued,¹³⁹ he argued that "such cases [in which the tortfeasor escaped liability] must have been exceptional and it is unlikely that most victims of negligent injuries failed to assert their claims because they couldn't identify the injurer."¹⁴⁰

To explain the legislatures' enactment of statutes requiring railroads to fence certain portions of their rights of way in order to avoid injuries to cattle, Posner asserted, "It is unlikely that the statutes reflect dissatisfaction with the accident level brought about by the common law rules. ... The question was who should pay for the fence and its maintenance."¹⁴¹ To explain limitations

¹³⁵ *Id.* at 34-35.

¹³⁶ *Id.* at 73.

¹³⁷ *Id.* at 32 (footnote omitted).

¹³⁸ *Id.* at 67.

¹³⁹ See Posner, *Economic Analysis*, *supra* note 23, at 241-42; A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 Harv. L. Rev. 869 (1998). The obvious inconsistency of this efficiency theory of punitive damages with the actual law, which is recognized by Polinsky and Shavell, is emphasized in Mark F. Grady, *Efficient Negligence*, 87 Geo. L.J. 397, 397-98 (1998), and Wright, *Principled Adjudication*, *supra* note 23, at 288-89.

¹⁴⁰ Posner, *Theory of Negligence*, *supra* note 23, at 41.

¹⁴¹ *Id.* at 59.

on the recovery of damages for individuals' emotional suffering, especially for such suffering related to the death or disability of children, he speculated that "the family in working-class homes of the nineteenth century was a less romantic institution than the family of today" and that "perhaps in an era of large families, high infant mortality, little knowledge of contraception, and no social security, a child of working-class parents was sometimes viewed by them as an income-producing asset whose destruction could be compensated for in much the same way as the destruction of property."¹⁴²

To explain why the duty of landowners toward trespassers generally was limited to avoiding knowingly injuring them, Posner stated that this limited duty was designed to protect the landowners' possessory rights.¹⁴³ This is a natural starting-point for a rights-based argument, but not a utilitarian or efficiency argument, since the latter theories view (what can no longer properly be called) "rights" as contingent on and derivative from an aggregate-risk-utility analysis in which each party's interests, trespasser or landowner, are considered to be equally important.¹⁴⁴ Posner further asserts that "[t]he rule of no liability may also rest on a judgment that the utility of trespassing, in general, is less than the cost that would have to be incurred to prevent injury to trespassers."¹⁴⁵ Yet, subsequently, he states that "there will still be — we want there to be — some trespassing."¹⁴⁶

To explain the "fellow servant" rule in workplace-injury cases, which absolved an employer of liability for an employee's injury if it was caused by the negligence of another employee, Posner argued that the rule most commonly applied only when the injured employee "was reasonably competent to discover and report negligent conduct endangering him," which, according to Posner, included situations in which the injured employee and the negligent employee merely "worked in reasonable

142 *Id.* at 47; *see id.* at 64 (offering the same explanation for the common law rule attributing to a child the negligence of its parent who caused the child's injury: "In a period when, as mentioned earlier, children may sometimes have been valued largely as income-producing assets, one could not rely on parental affection alone to protect them against unreasonable hazards.").

143 *Id.* at 38.

144 *See* Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1960) (cited by Posner, *Theory of Negligence*, *supra* note 23, at 33 n.10).

145 Posner, *Theory of Negligence*, *supra* note 23, at 38; *see id.* at 58 ("the cheapest accident-avoider in the usual railroad-trespasser case is the trespasser: he has only to avoid trespassing, which may be assumed to be less valuable than freedom from the interruption of railroading").

146 *Id.* at 58. Land occupiers' duty of care toward trespassers is discussed in *infra* Section II.B.

proximity — on the same line of the railroad, the same building project, the same plant."¹⁴⁷

Given these sorts of arguments, the limited types of situations that he discusses, and his failure to cite or discuss any specific cases, Posner's 1972 article on its face has minimal credibility. In fact, as far as I know, every other scholar who has examined tort-law decisions by American or British courts during the relevant period (1875-1905) has rejected Posner's claim that the courts were explicitly or implicitly employing an aggregate-risk-utility analysis or otherwise promoting economic efficiency.¹⁴⁸ One of these other scholars, Gary Schwartz, stated:

As it further considers [Posner's] efficiency thesis, this current Article confirms my earlier conclusion as to the inadequacy of that thesis. The evidence which provides this confirmation will be set forth in this Article's footnotes. ... To subordinate the thesis by providing for its treatment exclusively in footnotes seems appropriate. Posner seems virtually alone in offering the thesis as a general explanation for nineteenth-century tort law.¹⁴⁹

Posner's most extensive discussion of specific negligence cases occurs in Chapter Four of his and William Landes' book *The Economic Structure of Tort Law*,¹⁵⁰ which is based on their earlier article *The Positive Economic Theory of Tort Law*.¹⁵¹ They begin by repeating Posner's prior claims that "the basic negligence standard [is] epitomized by the Hand formula," as stated in the *Carroll Towing* case, and that "Hand was purporting only to make explicit what had long been the implicit meaning of negligence In fact

¹⁴⁷ Posner, *Theory of Negligence*, *supra* note 23, at 67; *see id.* at 69.

¹⁴⁸ *See, e.g.*, Gary T. Schwartz, *The Character of Early American Tort Law*, 36 UCLA L. Rev. 641, 641-43 & n.8 (1989) [hereinafter Schwartz, *Early American Tort Law*]; Gary T. Schwartz, *Tort Law and the Economy in Nineteenth-Century America: A Reinterpretation*, 90 Yale L.J. 1717, 1721 & nn.27-29, 1775 & n.417 (1981) [hereinafter Schwartz, *Nineteenth-Century America*]; Barbara Y. Welke, *Unreasonable Women: Gender and the Law of Accidental Injury, 1870-1920*, 19 Law & Soc. Inquiry 369, 370-72, 377-78 (1994); White, *supra* note 22, at 78, 80-81, 90-95; sources cited *supra* note 11.

¹⁴⁹ Schwartz, *Early American Tort Law*, *supra* note 148, at 643 n.8.

¹⁵⁰ Landes & Posner, *supra* note 4.

¹⁵¹ Richard Posner & William Landes, *The Positive Economic Theory of Tort Law*, 15 Ga. L. Rev. 851 (1981). Chapter Four of their book is based on Part III of their article, *id.* at 883-916.

something like the Hand formula has long been used to decide negligence cases."¹⁵²

As is true for almost all the cases that they discuss, their subsequent discussion of *Carroll Towing* itself is brief, factually inaccurate and incomplete, and conclusory:

The defendant's bargee had left his barge for twenty-one hours, during which time the barge broke away from its moorings and caused damage. No good reason for the bargee's protracted absence was offered. The harbor was a busy one (it was the height of World War II), the days were short, and the danger of collision was manifest. Hence $-p_y D$ [the marginal risk] was substantial, whereas the lack of a satisfactory explanation for the bargee's absence implied that B_y [the marginal utility] was very low. The court properly found negligence.¹⁵³

It was the plaintiff's bargee, not the defendant's, who was absent, and the plaintiff's barge suffered damage rather than causing damage to anyone else's property. The plaintiff was not found negligent with respect to the barge's breaking away from its moorings and colliding with the tanker, but rather for failing to prevent the barge's sinking after it had been damaged by the tanker's propeller. Moreover, as was discussed above, neither the holding in *Carroll Towing* nor Hand's reasoning that led to the holding was based on or consistent with his aggregate-risk-utility formula.¹⁵⁴

Landes and Posner quote language from two cases, one from the United States and one from Great Britain, to illustrate their claim that "something like the Hand formula has long been used to decide negligence cases."¹⁵⁵ Although one would expect the quoted language, and the cases from which the quotes are taken, to be the strongest they could find in support of their thesis, the quoted language from each case is, at best, ambiguous *dicta* and neither case applies an aggregate-risk-utility test.

The first case, *Mackintosh v. Mackintosh*,¹⁵⁶ is an 1864 Scottish case from which they merely quote "an English judge's" observation that

in all cases the amount of care which a prudent man will take must vary infinitely according to circumstances. No prudent man in carrying a lighted candle through a powder magazine would fail to take more

¹⁵² Landes & Posner, *supra* note 4, at 85-86.

¹⁵³ *Id.* at 104.

¹⁵⁴ See *supra* Section I.D.

¹⁵⁵ See *supra* text accompanying note 152.

¹⁵⁶ 2 M. 1357 (Scot. Ct. Sess. 1864).

care than if he was going through a damp cellar. The amount of care will be proportionate to the degree of risk run and to the magnitude of the mischief that may be occasioned.¹⁵⁷

Landes and Posner apparently rely on the last sentence. However, as we have previously discussed, this statement is not an endorsement of the aggregate-risk-utility test, but rather merely declares that the greater the risk, the more careful one must be, without any limitation based on the cost or burden of such care.¹⁵⁸ Moreover, the statement fails to incorporate the focus on *marginal* risks and costs of precaution that is required by the efficiency theory.¹⁵⁹

B. Premises Liability: Trespassers

The second case that Landes and Posner quote to support their historical claim is a 1902 Nebraska case, *Chicago, B. & Q. Railroad Co. v. Krayenbuhl*.¹⁶⁰ They quote, without any elaboration, the following extract from the court's lengthy opinion:

The business of life is better carried forward by the use of dangerous machinery; hence the public good demands its use, although occasionally such use results in the loss of life or limb. It does so because the danger is insignificant, when weighed against the benefits resulting from the use of such machinery, and for the same reason demands its reasonable, most effective, and unrestricted use, up to the point where the benefits resulting from such use no longer outweigh the danger to be anticipated from it. At that point the public good demands restrictions. For example, a turntable is a dangerous contrivance, which facilitates railroading; the general benefits resulting from its use outweigh the occasional injuries inflicted by it; hence the public good demands its use. We may conceive of means by which it might be rendered absolutely safe, but such means would so interfere with its beneficial use that the danger to be anticipated would not justify their adoption; therefore the public good demands its use without them. But the danger incident to its use may be lessened by the use of a lock which would prevent children, attracted to it, from moving it;

¹⁵⁷ *Id.* at 1362-63 (quoted in Landes & Posner, *supra* note 4, at 86).

¹⁵⁸ *See supra* text accompanying notes 67-70.

¹⁵⁹ *See, e.g.*, Posner, *Economic Analysis*, *supra* note 23, at 180-81.

¹⁶⁰ 91 N.W. 880 (Neb. 1902).

the interference with the proper use of the turntable occasioned by the use of such lock is so slight that it is outweighed by the danger to be anticipated from the omission to use it; therefore the public good, we think, demands the use of the lock. The public good would not require the owner of a vacant lot on which there is a pond to fill up the pond or inclose the lot with an impassable wall to insure the safety of children resorting to it, because the burden of doing so is out of proportion to the danger to be anticipated from leaving it undone. But where there is an open well on a vacant lot, which is frequented by children, of which the owner of the lot has knowledge, he is liable for the injuries, sustained by children falling into the well, because the danger to be anticipated from the open well, under the circumstances, outweighs the slight expense or inconvenience that would be entailed in making it safe.¹⁶¹

Landes' and Posner's claim that the *Krayenbuhl* opinion constitutes an explicit endorsement and application of the aggregate-risk-utility test has been repeated by others, including Michael Green.¹⁶² However, contrary to Landes' and Posner's broader claim, Green notes that *Krayenbuhl's* (supposed) endorsement of the aggregate-risk-utility test was the rare exception during this period and was ignored in subsequent opinions in Nebraska and elsewhere.¹⁶³ Moreover, despite the court's statement that the public good provided by the use of certain dangerous machinery "demands its reasonable, most effective, and unrestricted use, up to the point where the benefits resulting from such use no longer outweigh the danger to be anticipated from it," the court's reasoning and holding neither endorsed nor applied an aggregate-risk-utility test.

The plaintiff in *Krayenbuhl* was a four-year-old child injured while playing on the defendant railroad's unguarded and unlocked (or inadequately locked) turntable. The child was arguably an invitee, or at least a licensee, but for purposes of the defendant's argument — that it owed no duty to the child — the court accepted the defendant railroad's assumption that the child was a known frequent trespasser. The stated issue was whether Nebraska still accepted the "doctrine of the Turntable Cases" (which treated railroad

161 *Id.* at 882-83 (quoted in Landes & Posner, *supra* note 4, at 86).

162 See Green, *supra* note 6, at 1616-17; White, *supra* note 22, at 82 & n.20. However, Green notes that "for all the court's risk-benefit proselytizing, we find out later in the opinion that the jury was instructed with the standard reasonable-care instruction." Green, *supra* note 6, at 1619.

163 Green, *supra* note 6, at 1617-20 & n.63.

turntables as "attractive nuisances" to children) as an exception to the usual no-duty rule with respect to trespassers on the defendant's land.¹⁶⁴ The court held that the doctrine did apply. It relied on an earlier Nebraska case, *Tucker v. Draper*,¹⁶⁵ which it cited at the end of the language quoted by Landes and Posner and from which it had earlier quoted the following statement:

There may be, and often are, circumstances under which one owes some active duty to a trespasser upon his premises. [The court discussed situations involving intentional or knowing causation of injury to a trespasser.] A well may be so contrived as to act as a dangerous trap, and one who allows it so to remain upon his premises will, under some circumstances, be liable. If adults, or children of such age as to ordinarily be capable of discerning and avoiding danger, are injured while trespassing upon the premises of another, they may be without remedy; while under similar circumstances children of three or four years of age would be protected. If I know that there is an open well upon my premises, and know that children of such tender years as to have no notion of their danger are continually playing around it, and I can obviate the danger with very little trouble to myself, and without injuring the premises or interfering with my own free use thereof, I owe an active duty to those children ... I cannot urge their negligence as a defense, even though I have never invited or encouraged them, expressly or impliedly, to go upon the premises.¹⁶⁶

The court stated that the quoted language from *Tucker* "amounts to a reaffirmance of the doctrine of the turntable cases, and, to our minds, suggests the true principle upon which cases of this character rest," which it proceeded to state as a duty to take such precautions "as a man of ordinary care and prudence, under like circumstances would take." Recognizing that "at first sight, it would seem that the principle, thus stated, is too broad, and that its application would impose unreasonable burdens on owners, and intolerable restrictions on the ownership of property," the court added that "it must be kept in mind that it requires nothing of the owner that a man of ordinary care and prudence would not do of his own volition, under like circumstances. Such a man would not willingly take up unreasonable burdens, nor vex himself with intolerable restrictions."¹⁶⁷ As indicated by the

164 *Krayenbuhl*, 91 N.W. at 881-82.

165 86 N.W. 917 (Neb. 1901).

166 *Krayenbuhl*, 91 N.W. at 882 (quoting *Tucker*, 86 N.W. at 919-20).

167 *Id.*

court's adoption of the quote from *Tucker* as suggesting the true principle, as well as its own similar treatment of the well situation, the reasonable care the court required of landowners toward even child trespassers is merely to take precautions against known dangers of which the trespasser is known to be unaware if such precautions "can obviate the danger with very little trouble to [the landowner], and without injuring the premises or interfering with [the landowner's] own free use thereof."¹⁶⁸

This insignificant-burden standard of reasonable care, which takes into account the respective rights positions of the landowner and the child trespasser, is inconsistent with the aggregate-risk-utility test, which Landes and Posner (and others) incorrectly infer from the *Krayenbuhl* opinion. The insignificant-burden standard, rather than the aggregate-risk-utility test, is the standard that is set forth in the first and second Restatements. Section 339 of the Restatement Second states that a land occupier must take reasonable care to protect children from artificial conditions if: (1) the possessor knows or has reason to know the condition will involve a significant risk of death or serious bodily harm to children in places where the possessor knows or has reason to know children are likely to trespass; (2) the children because of their youth do not discover the condition or realize the risk involved; and (3) the utility to the possessor of maintaining the condition and the burden of eliminating the danger are slight as compared with the risk to the children.¹⁶⁹ For trespassers generally, the Restatements state that a land occupier owes no duty to exercise any care, except for current trespassers or frequent trespassers on a limited area of whom the possessor is aware, has reason to be aware, or, from facts actually within her knowledge, should be aware. The land occupier must take reasonable care to protect such trespassers only against risks created by active operations or by concealed artificial conditions that the possessor knows are (highly) dangerous. Reasonable care generally will only require a warning, unless there is insufficient time for an effective warning or the possessor is aware that the trespasser is unaware of or intends to disregard the warning.¹⁷⁰

British law is similar. For example, in the House of Lords' decision in *British Railways Board v. Herrington*,¹⁷¹ Lord Pearson stated, "There is also a moral aspect. ... [T]respassing is a form of misbehaviour, showing lack of consideration for the rights of others. It would be unfair if trespassers could

¹⁶⁸ See *supra* text accompanying note 166.

¹⁶⁹ Restatement (Second) of Torts § 339 (1965); see Restatement of Torts § 339 (1934).

¹⁷⁰ See Restatement (Second) of Torts §§ 333-38 (1965).

¹⁷¹ 1972 A.C. 877.

by their misbehaviour impose onerous obligations on others."¹⁷² Lord Reid elaborated:

[Trespassers] force a "neighbour" relationship on [the land occupier]. When they do so he must act in a humane manner — that is not asking too much of him — but I do not see why he should be required to do more.

So it appears to me that an occupier's duty to trespassers must vary according to his knowledge, ability, and resources. It has often been said that trespassers must take the land as they find it. I would rather say that they must take the occupier as they find him.

... [The occupier] might often reasonably think, weighing the seriousness of the danger and the degree of likelihood of trespassers coming against the burden he would have to incur in preventing their entry or making his premises safe, or curtailing his own activities on his land, that he could not fairly be expected to do anything. But if he could at small trouble and expense take some effective action, ... I think most people would think it inhumane and culpable not to do that. ...

It would follow that an impecunious occupier with little assistance at hand would often be excused from doing something which a large organization with ample staff would be expected to do.¹⁷³

Lord Reid's position in *Herrington* is mirrored in an American case that Landes and Posner discuss, *Hendricks v. Peabody Coal Co.*¹⁷⁴ The plaintiff teenager apparently broke his neck and was rendered a quadriplegic when he dove into the spring-and-rain-water-filled pit of the defendant's worked-out strip mine and struck his head on a sand shelf a few feet below the surface that extended out a few feet from the edge of the pit. The defendant coal company knew that its former mine pit was frequently used for swimming, boating, water-skiing, fishing, and picnicking and also knew that the sand shelf created a risk of serious injury to those, such as the injured plaintiff, diving into the water who could not see and were not aware of the position of the sand shelf. Yet, there were no signs prohibiting use of the water-filled pit, no fences or barricades to block the access road, and no warnings of

¹⁷² *Id.* at 925; *see id.* at 909-10 (Lord Morris); *id.* at 916, 919-21 (Lord Wilberforce); *id.* at 924-27 (Lord Pearson); *id.* at 936-37, 941-43 (Lord Diplock).

¹⁷³ *Id.* at 898-99; *see id.* at 936-37 (Lord Diplock).

¹⁷⁴ 253 N.E. 56 (Ill. App. 1969).

any dangers. The court upheld the lower court's findings that the defendant owed a duty to the plaintiff and was negligent.¹⁷⁵

Landes and Posner claim that *Hendricks* "demonstrate[s] how the courts apply the fundamental negligence doctrine, epitomized by the Hand formula" and, in particular, "how courts approach the question of determining B_y , the effect on the injurer's cost of care of adding another input of care."¹⁷⁶ They state:

The court pointed out that "the entire body of water could have been closed off with a steel fence for between \$12,000 and \$14,000. This cost was slight compared to the risk to the children involved." Alternatively, the defendant could have barricaded the road to the site to prevent entry or at least could have posted warning signs. Because the plaintiff's damages were \$200,000 and the swimming hole was heavily used — facts that suggested serious accidents were likely — the court was on safe ground in concluding that the defendant had failed to use due care.¹⁷⁷

Landes and Posner seem to be confusing *ex post* knowledge that an event occurred with the *ex ante* probability of the event's occurring.¹⁷⁸ Neither the fact that the swimming hole was heavily used nor the fact that the plaintiff suffered a serious injury implies that serious accidents were likely, *ex ante*. Moreover, the court did not explicitly or implicitly apply Hand's aggregate-risk-utility formula, much less the marginal version of Hand's formula that is required by the efficiency theory. Instead, the court quoted and applied the non-balancing, rights-respecting standard of reasonable care that is stated in section 339 of the Restatement: the land owner or occupier is required to take care only if he "knows or has reason to know" of the dangerous condition, "realizes or should realize [it] will involve an unreasonable risk of death or serious bodily harm" to children whom he "knows or has reason to know are likely to trespass," who "because of their youth do not discover the condition or realize the risk involved," and "the utility to the possessor of maintaining the condition and the burden of eliminating the danger are slight as compared with the risk to

¹⁷⁵ *Id.* at 57-58, 61.

¹⁷⁶ Landes & Posner, *supra* note 4, at 96.

¹⁷⁷ *Id.* at 96-97 (quoting *Hendricks*, 253 N.E.2d at 61); see Posner, *Economic Analysis*, *supra* note 23, at 182-83.

¹⁷⁸ I have previously discussed Posner's failure to appreciate this fundamental distinction in Wright, *Unscientific Formalism*, *supra* note 23, at 569-70.

children involved."¹⁷⁹ Landes and Posner ignore the various limitations on the defendant's duty of care that are stated in section 339, which are inconsistent with the aggregate-risk-utility test. They also ignore the sentence immediately following the language that they quote from *Hendricks*, which mirrors Lord Reid's discussion in *Herrington* of the "slight burden" limitation on the defendant's duty of care and the need to take into account the defendant's particular circumstances and resources in assessing the burden: "What could constitute a slight burden would necessarily depend on the facts of the case and likewise upon the economic capacity of the defendant."¹⁸⁰

Under the efficiency theory, it would seem that, contrary to the cases, defendant land occupiers should be at least as responsible for on-premises risks as off-premises risks, regardless of the status of the plaintiff entrant, and, indeed, arguably should be subject to strict liability for on-premises risks as the usual cheapest cost avoider with respect to such risks, which they control. Posner attempts to explain defendant land occupiers' very limited duty of care to trespassers and, conversely, the related strict (sometimes punitive) liability of trespassers as defendants by relying on an "encouraging market transactions" rationale:

Another rule of victim responsibility, although one in decline and subject to many exceptions, is that a landowner is not liable for negligent injuries to trespassers. This rule can be reconciled with the Hand Formula by noting that in the usual case such an injury can be prevented at lower cost by the trespasser, simply by not trespassing, than by the landowner. If the cost of avoidance by the trespasser is higher, he can purchase the land (or an easement in it) and so cease to be a trespasser. The rule thus serves the function — by now familiar to the reader — of encouraging market rather than legal transactions where feasible.¹⁸¹

Posner's assumption that the economic value of any trespass is generally less than the land occupier's risk-prevention costs (and/or the value of any conflicting uses of the land by the occupier) is unsupported and insupportable. Consider the major public recreation benefits resulting from trespassers' use of the defendant's flooded, unused strip mine in the *Hendricks* case. Moreover, Posner's assumption that any trespasser could

179 *Hendricks*, 253 N.E.2d at 60-61 (quoting Restatement (Second) of Torts § 339 (1965)).

180 *Hendricks*, 253 N.E.2d at 61.

181 Posner, *Economic Analysis*, *supra* note 23, at 190; *see id.* at 61-62, 224-26; Landes & Posner, *supra* note 4, at 42-43, 93 n.14, 95-96.

have cheaply bargained for the desired entry and thus should be required to do so (an assumption that he extends to all intentional torts) is also unsupported and insupportable, especially for the frequent one-time or spur-of-the-moment trespasses, which often occur when the land occupier is not present or immediately available.¹⁸²

C. Premises Liability: Invitees and Licensees

Landes and Posner also fail to note other significant aspects of the extract that they quote from the *Krayenbuhl* opinion. It repeatedly refers to the "public good" and the "general benefits" rather than the mere private interest of the defendant. Furthermore, it focuses on the "insignificance" of the danger in relation to the general benefits to the public, the extent to which the burden of the suggested precautions would be "out of proportion to the danger," and whether the suggested precautions would "so interfere with [the machinery's] beneficial use that the danger to be anticipated would not justify their adoption."¹⁸³ The court refused to treat the mere existence and use of a railroad turntable as negligent, given the general benefit it provides to everyone in society as part of the public transportation system, but it did require that the turntable be locked when untended and unguarded. Rather than an unlimited aggregate-risk-utility test, which would approve a defendant's imposing substantial risks on others for solely private benefits or for a merely marginal increase in the general public benefit, the quoted language considered in its entirety reflects a non-balancing, equal-freedom and rights respecting, prohibitory-cost test: the creation of significant risks to (non-trespassing) others is reasonable if and only if the risks are not too serious, necessary for the obtaining of some benefit desired by those being put at risk or by everyone in society, reduced to the maximum extent feasible without significantly impairing the desired benefit, and significantly outweighed by the desired benefit.

This non-balancing, prohibitory-cost test, which is reflected in the comments to the basic sections that define reasonable care in the first and second Restatements,¹⁸⁴ is employed by American and British courts in cases involving activities with general social benefit or participatory plaintiffs (willing participants in the defendant's activity who are seeking to benefit through their participation).¹⁸⁵ The latter category includes, but is not limited

182 See Wright, *Principled Adjudication*, *supra* note 23, at 288-89.

183 See *supra* text accompanying note 161.

184 See *infra* text accompanying notes 239-42.

185 See Gilles, *English Negligence Law*, *supra* note 11, at 491, 493, 498-500, 567, 569

to, premises-liability cases involving plaintiff invitees, rather than trespassers. (The standard of care a land occupier must exercise with respect to on-premises risks to mere licensees traditionally has been intermediate between the general duty of care owed to invitees and the very limited duty of care owed to trespassers.) A substantial majority of American jurisdictions still adhere to the traditional categorical distinctions among invitees, licensees, and trespassers, especially the separate treatment of trespassers, and even those jurisdictions that have eliminated some or all of the categorical distinctions in favor of a general duty of reasonable care toward all entrants on the defendant's land still take into account the status of the entrant in assessing reasonable care in the particular case.¹⁸⁶

The rights-based nature of the differential treatment of entrants on a defendant's property, depending on the status of the entrant, is clear in the case law. As the entrant's status shifts from invitee to trespasser, the rights of the occupier of the land strengthen in relation to those of the entrant, the required care lessens, and the perspective used to assess the

& n.331, 584-86, *passim*; Wright, *supra* note 14, at 435-41 & n.43, 462, 471-72 & n.183; Wright, *supra* note 6, at 264-68; *infra* Sections II.D., II.E.

186 See Keeton et al., *supra* note 2, §§ 58-62. The common law's categorical rules have been replaced in England by two acts of Parliament, which, however, still treat trespassers as a distinct category subject to a much more limited standard of care. The Occupiers' Liability Act, 1957, 5 & 6 Eliz. 2, c. 31 (Eng.), applies to invitees and licensees, who are owed the same "'common duty of care' ... except in so far as [the occupier] is free to and does extend, restrict, modify, or exclude his duty to any visitor or visitors by agreement or otherwise." The common duty of care is "a duty to take such care as in all the circumstances of the case is reasonable to see that the visitor will be reasonably safe in using the premises for the purposes for which he is invited or permitted by the occupier to be there," and a "warning is not to be treated without more as absolving the occupier from liability, unless in all the circumstances it was enough to enable the visitor to be reasonably safe." *Id.* The Occupiers' Liability Act of 1984 applies to trespassers. The occupier owes a duty to take reasonable care to avoid injury to trespassers if he is "aware or has reasonable grounds to believe" that the trespasser is within or may come within the vicinity of some dangerous risk and "the risk is one against which, in all the circumstances of the case, he may reasonably be expected to offer the [trespasser] some protection." In an appropriate case, this duty may be discharged "by taking such steps as are reasonable in all the circumstances of the case to give warning of the danger concerned or to discourage persons from incurring the risk." *Id.* There is little reason to think that the considerations mentioned by the *Herrington* court (see *supra* text accompanying notes 171-73) would not still be relevant under the 1984 Act. Other British Commonwealth countries have adopted similar legislation, or have achieved similar rules through judicial decision. See Fleming, *supra* note 2, at 449-53, 464-69.

required care shifts from the objective perspective of the ordinary person to the subjective perspective of the particular defendant.¹⁸⁷ This rights-based reasoning appears often in the comments to the relevant provisions of the Restatement and in the cases.¹⁸⁸

Landes and Posner discuss several premises-liability cases involving plaintiff invitees, the earliest of which is *Hauser v. Chicago, R.I. & P. Railway*.¹⁸⁹ Mrs. Hauser was a passenger on the defendant's train on a cold January night in Iowa. The car in which she was riding was hot. Feeling stuffy, dizzy, and nauseous, she put on her coat and went to the toilet compartment. After entering the small (5-by-3 foot) compartment, she apparently fainted and suffered a severe burn on one side of her face as a result of its coming into contact with a steam heating pipe under the water cooler. The steam pipes, which ran along the walls 2½-to-9 inches above the floor and provided heat to the compartment, were shielded from contact by covers, except for the portions under the washstand and water cooler. The washstand and water cooler filled the space at one end of the room, opposite the toilet at the other end, except for a 5½-inch space between them. They extended about 1½ feet into the room, and the bottom of each was about 28 inches from the floor. The jury found that the defendant's failure to cover the steam pipes under the water cooler was negligent, but the Iowa Supreme Court reversed and ordered that a judgment be entered in favor of the defendant.¹⁹⁰

Landes and Posner claim that the *Hauser* opinion exemplifies the use of the Hand formula:

The court held that the railroad had not been negligent in the design or construction of the toilet compartment, because the probability that a passenger would fall and wedge her face or another exposed part of the body against the hot steam pipe was too remote to require the railroad to have relocated or shielded the pipe, assuming that this would have been practicable. In economic terms $-p_y D$ [the marginal risk] was lower than B_y [the marginal cost of precaution], so the railroad was not negligent in not having taken greater care.¹⁹¹

187 See Wright, *supra* note 14, at 471-72; Wright, *supra* note 6, at 265-66.

188 See, e.g., Restatement (Second) of Torts §§ 330 cmt. h, 336 cmt. d, 339 cmt. n, 341 cmts. a, c, 342 cmts. f, l, 343 cmts. b, d (1965); Schwartz, *Nineteenth-Century America*, *supra* note 148, at 1766-67 & nn.366, 367 (noting the American courts' attention to such considerations in nineteenth- and twentieth-century premises-liability cases).

189 219 N.W. 60 (Iowa 1928).

190 *Id.* at 60-61.

191 Landes & Posner, *supra* note 4, at 105.

However, the Court did not engage in any balancing of marginal or even total precaution costs against reductions in expected injury costs. Without making any reference to the cost or burden of covering or otherwise shielding the pipes, the Court focused solely on the foreseeable risk:

The question is whether or not by the company's failure to cover these pipes or in some way protect them in the exercise of the high degree of care required [of a common carrier], it can be said that the company should have reasonably anticipated this injury, or a similar one, to this woman.

... In order to reach the steam pipes in controversy, an occupant of the room would be required to either kneel or lie down on the floor, and the company could not reasonably anticipate that an occupant of the room would do this. Even though the defendant is bound to anticipate that an occupant may faint or lose consciousness, the probability that she would fall with her face against a steam pipe is so remote that it cannot be held negligence for which the company should respond. Nor do we think it can be said that the company, in exercising the high degree of care required, could anticipate that an occupant of the room would faint and fall upon the floor in such a way as to throw some part of her body against the steam pipes in controversy. ... This is not a case of the exposing of hot steam pipes in a part of the car intended for the use of passengers, where, by the exercise of the care required under such circumstances, it would be reasonably anticipated that a passenger would come in contact therewith.¹⁹²

The Court clearly believed that the defendant would have been negligent if the risk of a passenger's coming into contact with the unshielded pipes could have been "reasonably anticipated" — i.e., if the risk were "reasonably foreseeable," which is the standard that was generally applied, along with a defense of "inevitable accident," by the courts during this period.¹⁹³

As *Hauser* demonstrates, "reasonable anticipation" or "reasonable foreseeability" requires more than a remote or fantastic possibility. Moreover, in situations like *Hauser*, in which the plaintiff is a willing participant in the defendant's risky activity who is seeking to benefit from such participation, the creation of even a significant foreseeable risk to the plaintiff will not be deemed negligent if the risk is not too serious and the typical participant would consider the risk to be inevitable and acceptable in order to receive

¹⁹² 219 N.W. at 62.

¹⁹³ See sources cited *supra* note 11.

the desired benefits, which may include the benefit of a lesser charge for participating in the activity. Thus, in *Hauser*, even if the risk of coming into contact with the hot steam pipes under the water cooler were significant, it would be reasonable if the risk were not too serious and if the typical passenger would prefer to take that risk rather than pay, through increased ticket prices or lessened funding of desired services, her share of the distributed costs (to all the railroad's passengers) of eliminating the risk by shielding the pipes in every similarly designed compartment on every train. Although the Court did not have to confront this issue in *Hauser*, since it did not consider the risk to have been reasonably foreseeable, it seems to have thought that the passengers would have preferred not to be subjected to the risk of coming into contact with the hot steam pipes if the risk were reasonably foreseeable.

This reasonableness standard, which, for participatory plaintiffs, takes into account the expected benefits to the participants as well as the magnitude of the risk, is often confused with the aggregate-risk-utility test.¹⁹⁴ However, it is quite different. The benefits taken into account are limited to those expected by the typical plaintiff,¹⁹⁵ rather than also including, as the aggregate-risk-utility test would, any independent utility to the defendant or aggregate social utility.¹⁹⁶ Moreover, the consideration of risks and benefits is not a simple,

194 See, e.g., Restatement (Third) of Torts: Liability for Physical Harm (Basic Principles) § 3 cmt. e at 63 (Tentative Draft No. 1, Mar. 28, 2001); White, *supra* note 22, at 83 n.22, 106, 109. Cf. Gilles, *English Negligence Law*, *supra* note 11, at 500, 569-70, 583-85 (claiming that British courts frequently employ "cost-benefit balancing" in these and other situations, yet admitting that they employ a "disproportionate-cost" test rather than a marginal balancing of aggregate risks and utilities and that the nature of the "balancing" varies depending on the relationships among the parties).

195 In the rare case in which the defendant's level of care practicably can be varied for the individual user, participant, or spectator, the focus should be on the risks and benefits to the specific individual, rather than the typical person. This is the case in the usual doctor-patient situation, in which the doctor is required to inform the patient of all risks and alternatives that he knows or should know would be material to the particular patient's decision to undergo some procedure or treatment and to obtain the patient's consent before undertaking the procedure or treatment, regardless of aggregate risk-utility or what the doctor thinks would be in the best interests of the patient and/or those economically or emotionally interested in the plaintiff's health, such as the patient's family, friends, employer, employees, and fellow workers. See Wright, *supra* note 6, at 268-69.

196 See, e.g., *Yates v. Chicago Nat'l League Ball Club, Inc.*, 595 N.E.2d 570 (Ill. App. 1992). The child plaintiff was injured by a line-drive foul ball while sitting in the area behind home plate at Wrigley Field. He alleged that the defendant baseball club negligently failed to provide adequate screening in the area behind home plate.

quantitative (much less marginal) balancing of risks against benefits, but rather an inquiry into whether those being put at risk would deem the risks inevitable and acceptable in order to obtain certain desired benefits from the activity. This inquiry might well result in a judgment that the defendant's failure to take certain precautions was negligent, given the nature and significance of the risks, even if in some quantitative sense, the cost of the precautions passed on to the participants seems to be greater than the risks. Generally, a defendant's creation of significant risks to participants in his activity will be deemed acceptable, and hence reasonable, if and only if the risks are not too serious, are necessary for the participants (or everyone in society) to obtain some desired benefit from the activity, are reduced to the maximum extent feasible without significantly impairing the desired benefit, and are significantly outweighed by the desired benefit (as viewed by the participants).¹⁹⁷

This test of reasonableness, rather than the Hand formula's aggregate-risk-utility test, also underlies the court's holdings in the other premises-liability case involving a plaintiff invitee that Landes and Posner discuss, *Lucy Webb Hayes National Training School v. Perotti*.¹⁹⁸ Perotti, who was a newly-admitted, unevaluated, voluntary mental patient in the defendant's custody and care, somehow slipped from the closed, secure ward, in which all new patients were confined pending evaluation, into the adjacent unsecured area, where he was found by a nurse. While being escorted by the nurse back to the closed ward, he ran away, jumped through a closed window in the unsecured area, and fell to his death.¹⁹⁹ The court held that, although the risk of Perotti's running away and jumping through a window after being apprehended may have seemed very small, a jury could find that it was unreasonable and a proximate cause of his death since there had been no therapeutic or other valid purpose for his presence in the unsecured area.²⁰⁰ On the other hand,

The defendant's expert testified that "an architect uses three criteria to determine the appropriate size for a screen: (1) the needs of the team; (2) the needs and desires of the fans; and (3) the physical configuration and constraints of the stadium." *Id.* at 577. The appellate court, in upholding a jury verdict for the plaintiff, did not refer to "the needs of the team," but rather focused solely on the risks and benefits from the perspective of the attending fans. It applied what it described as the majority rule, according to which a ballpark owner-occupier's duty of reasonable care "is usually satisfied if the owner-occupier 'provides screen for the most dangerous part of the grandstand and for those who may be reasonably anticipated to desire protected seats' for a typical game." *Id.* at 578 (citation omitted).

197 See *supra* text accompanying notes 183-85.

198 419 F.2d 704 (D.C. Cir. 1969).

199 *Id.* at 706-07.

200 *Id.* at 709-11.

the court held that the use of quarter-inch thick safety glass in the windows of the unsecured area rather than grates or stronger tempered, laminated, or bullet-proof glass could be justified by its therapeutic advantages in creating an open, pleasant atmosphere for the patients.²⁰¹

Implying, contrary to fact, that the hospital staff knew or should have known that Perotti was suicidal, Landes and Posner conclusorily assume that " $-p_y D$ [the marginal risk] was high relative to B_y [the marginal burden of precaution], given that the hospital had established a closed ward for such patients and had only to secure it" ²⁰² They also argue that "[t]he existence of a preexisting voluntary relationship between doctors and patients suggests that transaction costs were not prohibitive and hence, via the Coase theorem, that customary standards [here, the defendant's practice of keeping the door between the closed ward and the adjacent unsecured area locked] were efficient." ²⁰³ This argument, which is implausible even with respect to mentally normal patients, given the great disparity in doctors' and patients' relevant knowledge, ²⁰⁴ is ludicrous when applied to patients like Perotti in a mental institution.

D. Other Participatory-Plaintiff Situations

Another common participatory-plaintiff situation involves employees who are injured as a result of conditions or activities at their workplace. Employees in the United States generally can no longer sue their employers for workplace injuries under negligence law, which has been displaced by statutory workers' compensation systems. However, British law still allows employees to bring negligence suits against their employers.²⁰⁵ In a recent article, Stephen Gilles, who supports a loose conception of "Hand formula balancing," discusses a number of British workplace injury cases and finds that the British courts, in these and other cases, employ a "disproportionate-cost balancing" test, which is actually the non-balancing, prohibitory-cost test that we have previously discussed, rather than the aggregate-risk-utility test that is championed by Landes and Posner.²⁰⁶

²⁰¹ *Id.* at 707-09.

²⁰² *See* Landes & Posner, *supra* note 4, at 106-07.

²⁰³ *Id.* at 107.

²⁰⁴ *See supra* note 195.

²⁰⁵ *See* Fleming, *supra* note 2, at 503-04, 522.

²⁰⁶ *See* Gilles, *English Negligence Law*, *supra* note 11, at 491, 493, 498-500, 567, 569 & n.331, 584-86, *passim*. Although Gilles describes the "disproportionate cost" test as a balancing test, and often even describes it as involving "cost-benefit balancing," he distinguishes it from the literal balancing of aggregate risks against

One of the cases that Gilles discusses, *Paris v. Stepney Borough Council*,²⁰⁷ is also discussed by Landes and Posner. The plaintiff in *Paris* was employed to maintain, repair, and disassemble vehicles. He had already lost the sight in one eye as a result of a wartime injury. While disassembling a vehicle, he hit a rusty bolt with a hammer to loosen it, which was common practice, and a steel chip flew off and entered his unprotected good eye, causing the loss of sight in that eye also and rendering him totally blind. The trial judge, without explicitly deciding whether the employer should have provided goggles to the plaintiff's fellow workers who had two good eyes, found that the employer was negligent in not providing goggles to the plaintiff, who the employer knew had only one good eye. The Court of Appeal reversed, holding (implausibly) that only the probability of injury and not its magnitude is relevant on the issue of reasonable care.²⁰⁸ Although the plaintiff's attorneys emphasized the plaintiff's special vulnerability in the post-trial appeals, one of his attorneys argued before the House of Lords:

So far this case has developed on the lines that there is no question this work was dangerous for the ordinary man. ... [The trial judge] treated this case as a fortiori to the case of the man with two eyes. Had it been necessary to decide it he might well have held that this was a dangerous process for ordinary [two-eyed] people.²⁰⁹

The House of Lords reinstated the trial judge's judgment. Each lord justice agreed that the magnitude, as well as the probability, of foreseeable injury to the particular employee is a relevant consideration, but they differed on whether the defendant's failure to provide goggles to the plaintiff (and his two-eyed fellow workers) and to require their use was negligent. Lords Simonds and Morton thought that there was not a significant legal difference between the situation of a one-eyed mechanic and a two-eyed mechanic, since for the two-eyed, both eyes were at risk and the loss of sight to even one eye would still be a very serious loss: "[The possible injury is] so serious in its consequence to any man, whether one-eyed or two eyed,

aggregate utilities that occurs under the aggregate-risk-utility test. *See id.* at 491, 496-97. Moreover, this "disproportionate cost" test, as applied by the English courts, does not actually involve any balancing, but rather is the non-balancing, rights-respecting, prohibitory-cost test that has been previously discussed in this article. *See Wright, supra* note 14, at 435-41; *supra* text accompanying notes 14, 183-85, 193-201.

207 1951 A.C. 367 (1950).

208 *See id.* at 367-68, 370, 375-76.

209 *Id.* at 372 (argument by R.M.H. Everett).

that, if the risk of it was appreciable, it would be the clear duty of the employer to provide and enforce the use of proper precautions against it."²¹⁰ They nevertheless concluded that, given the very low probability of injury, the risk was not appreciable, and therefore the employer was not negligent for failing to provide and require the use of goggles by either two-eyed or one-eyed mechanics.²¹¹ Lord MacDermott disagreed on both points; he concluded that the employer could reasonably be found negligent for failing to provide goggles to his two-eyed employees as well as the one-eyed plaintiff.²¹² Lord Normand, while implying that he might agree with Lord MacDermott, left the two-eyed mechanic issue open and contented himself with upholding the trial judge's holding with respect to the one-eyed plaintiff.²¹³ Lord Oaksey agreed with Lord Normand.²¹⁴

Landes and Posner simply observe that *Paris* "illustrates judicial attention to the magnitude of the loss if an accident occurs."²¹⁵ Gilles states that "[t]he judgments in [*Paris*] seem to engage in balancing, but stop well short of formally adopting a balancing test."²¹⁶ Indeed, there is little indication of any "balancing" in the various opinions. There are only three references to the burden of precaution, none of which is part of an explicit or implicit balancing of aggregate risks and utilities and each of which is consistent with the non-balancing, prohibitory-cost test. Lord MacDermott noted that "it is clear that the wearing of goggles would not have hampered the work in question."²¹⁷ Lord Oaksey stated that "it is a simple and inexpensive precaution to take to supply goggles, and a one-eyed man would not be likely, as a two-eyed man might be, to refuse to wear the goggles."²¹⁸ Lord Normand, who did not refer to the cost of precaution in agreeing with the trial judge that the known risk

210 *Id.* at 374, 378 (Simonds, L.J.); *see id.* at 385, 386-87 (Morton, L.J.).

211 *See id.* at 376-78 (Simonds, L.J.); *id.* at 386-87 (Morton, L.J.).

212 *See id.* at 387, 390-91.

213 *See id.* at 379, 383-84.

214 *See id.* at 384, 384-85.

215 Landes & Posner, *supra* note 4, at 100. They also state, incorrectly, that "[t]he parties agreed that, given the unlikelihood of such an accident in this line of work, it would not have been negligent for the employer to have failed to supply goggles to an employee who had two good eyes." *Id.* The plaintiff did not concede this, and the House of Lords viewed it as an open issue, which, however, did not need to be resolved. *See supra* text accompanying notes 207-14.

216 Gilles, *supra* note 11, at 491-92.

217 *Paris*, 1951 A.C. at 390.

218 *Id.* at 385.

had made the supplying of goggles to the plaintiff "obviously necessary,"²¹⁹ stated in *dicta*,

To guard against possible misunderstanding it may be well to add here that the seriousness of the injury or damage risked and the likelihood of its being in fact caused may not be the only relevant factors. For example, Asquith, L.J., in *Daborn v. Bath Tramways Motor Co. Ltd.*, pointed out that it is sometimes necessary to take account of the consequence of not assuming a risk.²²⁰

In *Daborn*, the Court of Appeal held that the plaintiff had not been contributorily negligent by driving an ambulance with a left-side steering wheel and giving hand signals out the left window, contrary to Britain's left-lane driving rules, since it was necessary to use such left-hand drive vehicles given wartime shortages and a large notice was posted on the back of the vehicle which stated "Caution — Left hand drive — No signals."²²¹

Another frequently occurring participatory-plaintiff situation involves suits by product users against product manufacturers or sellers alleging injury due to a defective product design. A common (but not exclusive²²²) test of a defective product design is an explicit "risk-utility" test, which Landes and Posner assume is the Hand formula's aggregate-risk-utility test: "Little need be said about defective design because the courts follow an explicit Hand formula approach."²²³ However, the "risk-utility" test for defective product designs is the non-balancing, prohibitive-cost test rather than the aggregate-risk-utility test. According to the Restatement Third, a product "is defective in design when the foreseeable risks of harm posed by the product could have been

219 *Id.* at 383.

220 *Id.* at 382 (citing *Daborn v. Bath Tramways Motor Co.*, [1946] 2 All E.R. 333, 336 (C.A.)).

221 *Daborn*, [1946] 2 All E.R. at 334-35. In *dicta*, Lord Asquith noted,

A relevant circumstance to take into account may be the importance of the end to be served by behaving in this way or in that. As has often been pointed out, if all the trains in this country were restricted to a speed of 5 miles an hour, there would be fewer accidents, but our national life would be intolerably slowed down. The purpose to be served, if sufficiently important, justifies the assumption of an abnormal risk.

Id. at 336. The application of the non-balancing, prohibitive-cost test to these sorts of socially valuable activities is discussed in *infra* Section II.E.

222 A consumer-expectations test is also often employed. See *infra* text accompanying notes 480-87.

223 Landes & Posner, *supra* note 4, at 291; see Posner, *Economic Analysis*, *supra* note 23, § 6.6, at 197.

reduced or avoided by the adoption of a reasonable alternative design ... and the omission of the alternative design renders the product not reasonably safe."²²⁴ Rather than an unlimited, quantitative, marginal comparison of aggregate costs and benefits to everyone, the Restatement Third, consistent with the case law, calls for consideration of a broad range of factors, which includes all the risks and benefits to the product's users, but not any purely private utility to the defendant or aggregate social utility: "Although the increase in cost to consumers is a relevant consideration, the impact of a finding of defectiveness on the general economy or on the profitability of the [product] manufacturer is not a factor to be considered in deciding whether the alternative safer design is reasonable."²²⁵ The Restatement Third elaborates:

The [relevant] factors include, among others, the magnitude and probability of the foreseeable risks of harm, the instructions and warnings accompanying the product, and the nature and strength of consumer expectations regarding the product. ... [T]he likely effects of the [plaintiff's proposed] alternative design on production costs [which will affect the price of the product]; the effects of the alternative design on product longevity, maintenance, repair, and esthetics; and the range of consumer choice among products are factors that may be taken into account. ... On the other hand, it is not a [relevant] factor ... that the imposition of liability would have a negative effect on corporate earnings or would reduce employment in a given industry.²²⁶

224 Restatement (Third) of Torts: Products Liability § 2(b) (1998); *cf. id.* § 2(c) (a product is "defective because of inadequate instructions or warnings when the foreseeable risks of harm posed by the product could have been reduced or avoided by the provision of reasonable instructions or warnings ... and the omission of the instructions or warnings renders the product not reasonably safe").

225 *Id.* § 2 cmt. f, illus. 7; see also *id.* § 10 cmt. i, on post-sale failure to warn, which, as initially drafted, would have required a warning "only if the risk of harm outweighs the costs of providing a post-sale warning," but which was modified, after objections were raised to this balancing language, to conform to section 10(d), which merely requires that "the risk of harm is sufficiently great to justify the burden of providing a warning." See American Law Institute, 73rd Annual Meeting, 1996 Proceedings 223 (1997).

226 Restatement (Third) of Torts: Products Liability § 2 cmt. f (1998). The Restatement adds: "Given inherent limitations on access to relevant data, the plaintiff is not required to establish with particularity the costs and benefits associated with the adoption of the suggested alternative design." *Id.*; see John W. Wade, *On the Nature of Strict Tort Liability for Products*, 44 Miss. L.J. 825, 837-38 (1973) (setting forth a similar list of consumer-oriented factors); Green, *supra* note 6, at 1631-42 (noting

E. Socially Valuable Activities

As previously mentioned,²²⁷ the non-balancing, prohibitory-cost test is applied not only to situations involving participatory plaintiffs, who expect some direct benefit from their participation in the defendant's activity, but also to activities that benefit, directly or indirectly, everyone in society. Several cases discussed by Landes and Posner involve or refer to such socially valuable activities, which are "socially valuable" not in the utilitarian sense of maximizing aggregate social utility, but rather in the justice-related sense of enhancing everyone's equal freedom.²²⁸

For example, Landes and Posner assume that the Wisconsin Supreme Court's discussion of the negligence standard in *Osborne v. Montgomery*,²²⁹ a brief extract from which was reprinted in a leading casebook,²³⁰ "is consistent with the Hand formula interpreted in economic terms."²³¹ They simply quote the last sentence of the following paragraph in the *Osborne* opinion:

The fundamental idea of liability for wrongful acts is that upon a balancing of the social interests involved in each case, the law determines that under the circumstances of the particular case an actor should or should not become liable for the natural consequences of his conduct. One driving a car in a thickly populated district, on a rainy day, slowly and in the most careful manner, may do injury to the person of another by throwing muddy or infected water upon that person. Society does not hold the actor responsible because the benefit of allowing people to travel under such circumstances so far outweighs the probable injury to bystanders that such conduct is not disapproved. Circumstances may require the driver of a fire truck to take his truck through a thickly populated district at a high rate of speed, but if he exercises that degree of care which such drivers ordinarily exercise under the same or similar circumstances, society, weighing the benefits against the probabilities of damage, in spite of the fact that as a reasonably prudent and intelligent man he should

that Wade's influential factor-list and the courts' actual practice are inconsistent with the efficiency theory's marginal risk-utility test).

227 See *supra* text accompanying notes 184-85.

228 See Wright, *supra* note 4, at 1864-71.

229 234 N.W. 372 (Wis. 1931).

230 Charles O. Gregory et al., Cases and Materials on Torts 107-08 (3d ed. 1977).

231 Landes & Posner, *supra* note 4, at 104; see *id.* ("The discussion [in *Osborne*] is consistent with the economic approach.").

foresee that harm may result, justifies the risk and holds him not liable.²³²

The quoted language is *dicta*. In the actual case, an errand boy riding a bicycle was injured when the defendant stopped his car in the street between a row of parked cars on the right and the street-car tracks on the left and opened his left-hand door directly in the path of the plaintiff, causing the plaintiff and his bicycle to hit the ground. The jury found the defendant negligent and the plaintiff free of contributory negligence. The defendant appealed, challenging the jury instructions, none of which contained any balancing language.²³³ Although the Wisconsin Supreme Court was troubled by one of the three different instructions on the standard of care in negligence — an ambiguous foreseeable-risk ("injury or danger might probably result") instruction, which the Court (mis)read as an absolute liability instruction for mere causation of injury — it upheld the standard-of-care instructions overall,²³⁴ while suggesting that the following combined formulation be used in future cases:

[B]efore liability can be predicated upon the acts of the defendant, it must appear that he has failed to exercise that degree of care which the great mass of mankind exercises under the same or similar circumstances, which is usually designated "ordinary care." While this standard lacks definiteness, if it be conceded that some standard must be applied, no better standard is suggested, and we find none.²³⁵

This instruction contains no reference to risk-utility balancing. Moreover, the hypotheticals in the quoted paragraph from the court's opinion are not phrased in terms of an aggregate-risk-utility test, but rather focus on the general social benefit of the hypothesized activities and track the non-balancing, prohibitive-cost test. When discussing the first hypothetical, the Court states,

One driving a car in a thickly populated district, on a rainy day, *slowly and in the most careful manner*, may do injury to the person of another by throwing muddy or infected water upon that person. Society does not hold the actor responsible because the *benefit of allowing people to*

232 234 N.W. at 376 (partially quoted in Landes & Posner, *supra* note 4, at 104).

233 *Id.* at 374, 375.

234 *Id.* at 375-76.

235 *Id.* at 376.

travel under such circumstances *so far outweighs* the probable injury to bystanders that such conduct is not disapproved."²³⁶

That is, even though an activity, such as the driving of vehicles, creates significant risks to others, it is not negligent if: it is a socially valuable activity (i.e., one that enhances everyone's equal freedom); the risks are an inherent, inevitable part of the activity; it is operated in such a way as to minimize the risks as much as possible without losing the desired general benefit; the risks to non-participants are not too serious (in the Court's hypothetical, they are minimal); and the general social benefit significantly outweighs the risks.

Similarly, in its discussion of the second hypothetical, the Court states,

Circumstances may require the operator of a fire truck to take his truck through a thickly populated district at a high rate of speed, but *if he exercises that degree of care which such drivers ordinarily exercise ... society weighing the benefits against the probabilities of damage ... justifies the risk.*"²³⁷

In such emergency situations, in which the defendant operator of the public emergency vehicle is seeking to alleviate serious threats to people's lives or property, the ordinary right-of-way rules are preempted and the defendant is held to be justified in engaging in conduct (e.g., driving at high speeds, on the wrong side of the road, and through traffic signals) that ordinarily would be deemed negligent, *but only* if she undertakes alternative precautions (such as sounding sirens, flashing lights, and slowing down at intersections) so that those thereby put at risk can, without significant interference with their legitimate activities, avoid being exposed to a substantial risk of injury. In many jurisdictions, even operators of public emergency vehicles are not allowed to depart from the ordinary rules of the road in the absence of explicit statutory authorization, and they must strictly comply with the alternative precautions specified in the statute to avoid being held negligent.²³⁸

236 *Id.* (emphasis added). See *supra* text accompanying note 232.

237 234 N.W. at 376 (emphasis added).

238 See J.H. Cooper, Annotations, 82 A.L.R.2d 312 (1962) (fire department vehicles); 83 A.L.R.2d 383 (1962) (police vehicles); 84 A.L.R.2d 121 (1962) (ambulances). For a report on attempts to restrict (often careless) high-speed police chases, which produce significant (socially irrelevant) private utility for the police officers involved in addition to the (socially relevant) crime-control benefits, but result in a substantial number of fatalities and injuries each year, not only to those involved in the chases but also to innocent drivers and bystanders, see Naftalie Bendavid, *Police Pursue New High-Speed Policy*, Chi. Trib., Sept. 9, 1997, § 1, at 1, 18.

As we previously mentioned, the primary motivation for the first Restatement's novel risk-utility test of negligence seems to have been a desire to prevent juries from treating as negligent the inherent risks involved in these sorts of socially valuable activities.²³⁹ The illustrations in the comments to the relevant sections, sections 291 to 293, which were carried over essentially intact into the second Restatement, refer only to socially valuable activities and conform to the prohibitive-cost test rather than an unlimited aggregate-risk-utility test. In each Restatement, comment a to section 292 states:

The irreducible minimum of risk both to employees and outsiders which is inherent in manufacture is not regarded as unreasonable, not so much because manufacture is profitable to those who carry it on, but because it is believed that the whole community benefits by it. The operation of railways and other public utilities, no matter how carefully carried on, produces accidents which kill or harm many people but the risk involved in the operation is more than counterbalanced by the service which they render the public.²⁴⁰

Similarly, comment e to section 291 states:

The law attaches utility to general types or classes of acts as appropriate to the advancement of certain interests rather than to the purpose for which a particular act is done, except in the case in which the purpose is of itself of such public utility as to justify an otherwise impermissible risk. Thus, the law regards the free use of the highway for travel as of sufficient utility to outweigh the risk of carefully conducted traffic, and does not ordinarily concern itself with the good, bad, or indifferent purpose of a particular journey. It may, however, permit a particular method of travel which is normally not permitted if it is necessary to protect some interest to which the law attaches a preeminent value, as where the legal rate of speed is exceeded in the pursuit of a felon or in conveying a desperately wounded patient to a hospital.²⁴¹

239 See Wright, *supra* note 1, at 153-56; *supra* text accompanying notes 11-14.

240 Restatement of Torts § 292 cmt. a (1934); Restatement (Second) of Torts § 292 cmt. a (1965).

241 Restatement (Second) of Torts § 291 cmt. e (1965); see Restatement of Torts § 291 cmt. e (1934). Comment b to section 293 in the first Restatement reiterates:

A car may be driven at fifteen miles an hour through a city street upon the least important errands, but driving a car at forty or fifty miles an hour can be

The illustrations in these comments involve activities — manufacturing, the operation of railways and other public utilities, and vehicular travel on highways — that are deemed reasonable by the members of the community "not so much because [they are] profitable to those who carry [them] on, but because: (i) it is believed that the whole community benefits" from them, (ii) the relevant risks are "inherent" in the activities and have been lowered to the "irreducible minimum" consistent with the members of the community obtaining the general public benefit, and (iii) the remaining inherent "irreducible" risks are "more than counterbalanced [greatly outweighed] by the service which they render the public."

Landes and Posner also discuss *Adams v. Bullock*,²⁴² in which a twelve-year-old plaintiff suffered an electrical shock and burn when, while crossing a bridge, the eight-foot wire that he was swinging over the eighteen-inch-wide parapet of the bridge came in contact with the defendant's trolley wire. The trolley wire, which supplied power to the defendant's trolleys that ran below the bridge, was 4 feet 7¾ inches below the top of the bridge's parapet. Writing for the New York Court of Appeals, Judge Benjamin Cardozo reversed the jury's verdict for the plaintiff, holding that, given the facts in the record, the defendant had not been negligent, since it was not reasonably foreseeable that a person on the bridge might come into contact with the trolley wire: "[N]o one standing on the bridge or even bending over the parapet could reach it. Only some extraordinary casualty, not within the area of ordinary prevision, could make it a thing of danger."²⁴³

Cardozo also pointed out that the possibility of a person's making contact with the wires by using long wires or poles or climbing on top of a vehicle or up a tree was no greater at that location than at any other location along the trolley's route,²⁴⁴ and there was no way to eliminate such possibilities other than by putting the wires underground or shutting down the trolley:

There is, we may add, a distinction not to be ignored between electric light and trolley wires. The distinction is that the former may be insulated. Chance of harm, though remote, may betoken negligence, if needless. Facility of protection may impose a duty to protect. With

justified only by some errand of great importance such as the extinguishment of fire or the saving of human life.

Restatement of Torts § 293 cmt. b (1934); see Restatement (Second) of Torts § 293 cmt. b (1965) (replacing "forty or fifty" with "sixty or seventy").

242 125 N.E. 93 (N.Y. 1919).

243 *Id.*

244 *Id.*

trolley wires, the case is different. Insulation is impossible. Guards here and there are of little value. To avert the possibility of this accident and others like it at one point or another on the route, the defendant must have abandoned the overhead system, and put the wires underground. Neither its power nor its duty to make the change is shown. To hold it liable upon the facts exhibited in this record would make it liable as an insurer.²⁴⁵

Landes and Posner cite this language as "a clear statement of the proposition that the optimal level of care is a function of its cost."²⁴⁶ However, Cardozo's opinion does not engage in any aggregate-risk-utility balancing, but rather employs, at most, the non-balancing, prohibitive-cost test for socially valuable activities. Cardozo stated that the "[c]hance of harm, *though remote*, may betoken negligence, *if needless. Facility of protection may impose a duty to protect*" (emphasis added). He did not qualify this statement by any reference to the cost of precaution. His stated reason for holding that the defendant had not been negligent is not that the burden of the precautions was greater than the risk, but rather that the risk was too remote. While noting, in *dicta*, that even a remote risk might be negligent if needless, Cardozo pointed out that the only way to eliminate the remote risk in this case would be to shut down the trolley or put the wires underground (which would seem to be impossible while continuing to operate the trolley, given the need for the trolley to maintain contact with the electric wires), and requiring either would be contrary to the grant of the trolley franchise: "The defendant in using an overhead trolley was in the lawful exercise of its franchise. Negligence, therefore, cannot be imputed to it because it used that system and not another."²⁴⁷ The inherent risks of the trolley system with its overhead electric wires were deemed acceptable by the community since the trolley system provided substantial transportation benefits to everyone in the community, the risks were not serious and were reduced to the maximum extent feasible while still obtaining the desired social benefits, and the social benefits greatly outweighed the risks.

²⁴⁵ *Id.* at 94.

²⁴⁶ Landes & Posner, *supra* note 4, at 98; see Posner, *Economic Analysis*, *supra* note 23, at 182 (stating that this language is "suggestive of economic insight"). Others have also miscited *Adams* as a supposed clear example of the use of the aggregate-risk-utility test. See Draft Restatement (Third) of Torts § 3, reporters' note at 55 (Tentative Draft No. 1, Mar. 28, 2001); Rabin, *supra* note 24, at 2275; White, *supra* note 22, at 96, 99-102.

²⁴⁷ 125 N.E. at 93 (citation omitted).

Landes and Posner similarly misdescribe two other cases involving socially valuable activities, neither of which involved any risk-utility balancing. In *Blyth v. Birmingham Water Works Co.*,²⁴⁸ the court held that the defendant water company could not be found negligent for failing to remove ice around a fire plug that apparently prevented a relief stopper from rising, so that pressure built up and water escaped into and damaged the plaintiff's house.²⁴⁹ Baron Alderson stated,

The defendants had provided against such frosts as experience would have led men, acting prudently, to provide against; and they are not guilty of negligence, because their precautions proved insufficient against the effects of the extreme severity of the frost of 1855, which penetrated to a greater depth than any which ordinarily occurs south of the polar regions. Such a state of circumstances constitutes a contingency against which no reasonable man can provide.²⁵⁰

The other judges agreed that the risk was unforeseeable. Baron Bramwell stated that "it would be monstrous to hold the defendants responsible because they did not foresee and prevent an accident, the cause of which was so obscure, that it was not discovered until many months after the accident had happened"; and Baron Martin declared that "[t]o hold otherwise would be to make the company responsible as insurers."²⁵¹ There was no reference to precaution costs, much less any balancing of the risks against the costs of precaution. Yet Landes and Posner claim that "this passage indicates an implicit concern with marginal or incremental rather than total costs of care."²⁵²

248 156 Eng. Rep. 1047 (1856).

249 *Id.* at 1048.

250 *Id.* at 1049.

251 *Id.* Similarly, in *McDowall v. Great Western Railway*, [1903] 2 K.B. 331 (C.A.) (discussed in Landes & Posner, *supra* note 4, at 105-06), the court found that the risk of children's uncoupling and unbraking a railroad car parked on an incline so that it would roll down the incline was not reasonably foreseeable. *Id.* at 336 (Williams, L.J.); *id.* at 338 (Romer, L.J.); *id.* at 339 (Stirling, L.J.). One of the judges added that the allegedly negligent failure to place the cars above rather than below a catch point would have been futile in preventing the injury that occurred, since the effort required to open the catch point was much less than that required to unlock, decouple, and unbrake the car. *Id.* at 335, 336-37 (Williams, L.J.).

252 Landes & Posner, *supra* note 4, at 99-100. In Posner's text, *Blyth* is the first example of the courts' supposed use of the Hand formula's aggregate-risk-utility test: "The damage was not so great as to make the expected cost of the accident greater than the cost of precaution, which would have involved a heavy expense in burying the pipes deeper." Posner, *Economic Analysis*, *supra* note 23, at 182.

In *Cooley v. Public Service Co.*,²⁵³ the plaintiff suffered traumatic neurosis, accompanied by loss of sensation on her left side, as a result of fright caused by a loud explosive noise on the telephone she was using. The noise was caused by the defendant power company's uninsulated 2300-volt power line falling down and coming into contact with the defendant telephone company's line, over which it crossed. The telephone company's wires were encased in a grounded lead sheath cable that was supported by a grounded messenger wire, and there were further protective grounding devices at the phone service entry to the plaintiff's home. The uninsulated power line broke and fell across the telephone messenger wire, creating an arc, which burned through the messenger wire and halfway through the phone cable before it was automatically shut off by grounding. The neurosis that the plaintiff suffered was very rare, especially due to such noise, but foreseeable.²⁵⁴ The appellate court reversed the verdict against the power company, holding that each suggested untaken precaution, such as insulating the power line or placing a basket between it and the phone line, that might have reduced or eliminated the (very low) risk of such noise-caused neurosis would have had the countervailing effect of increasing the much more significant risk of electrocution to persons on the street beneath the power line.²⁵⁵

In the case before us, there was danger of electrocution in the street. As long as the Telephone Company's safety devices are properly installed and maintained, there is no danger of electrocution in the house. The only foreseeable danger to the telephone subscriber is from noise — fright and neurosis. Balancing the two, the danger to those such as the plaintiff is remote, that to those on the ground near the broken wires is obvious and immediate. The balance would not be improved by taking a chance to avoid traumatic neurosis of the plaintiff at the expense of greater risk to the lives of others. To the extent that the duty to use care depends on relationship, the defendant's duty of

The court focused solely on the (un)foreseeability of the risk. It did not discuss the extent of the damage to the plaintiff's house, nor the expense or utility of burying the pipes deeper. The alleged negligence was the failure to clear the ice from the fireplug at the surface, not the failure to bury the pipes deeper. No matter how deep the pipes were buried, the fireplug and its connecting pipe would, of necessity, still be at the surface, and the cost of clearing the ice from the plug would have been slight.

253 10 A.2d 673 (N.H. 1940).

254 *Id.* at 674-75.

255 *Id.* at 675-76.

care towards the plaintiff is obviously weaker than that towards the man in the street.²⁵⁶

In their brief discussion of *Cooley*, Landes and Posner (who state that the plaintiff merely "fainted" as a result of the loud noise on the phone line) treat the court's discussion of the alternative risks as an illustration of marginal cost-benefit balancing.²⁵⁷ Indeed, although not noted by Landes and Posner, the court cited sections 291 to 295 of the Restatement for the proposition that "the duty of care requires precisely the measure of care that is reasonable under all the circumstances."²⁵⁸ However, the court clearly had in mind the non-balancing, prohibitive-cost test of reasonable care rather than the aggregate-risk-utility test. Despite the very low risk of the noise-caused neurosis suffered by the plaintiff, the court stated,

It is not doubted that due care might require the defendant to adopt some device that would afford protection against emotional disturbances in telephone-users without depriving the traveling public of reasonable protection from live wires immediately dangerous to life. Such a device, if it exists, is not disclosed by the record. The burden was on the plaintiff to show its practicability.²⁵⁹

F. Putting Others at Risk for One's Purely Private Benefit

Under the aggregate-risk-utility test, it is proper (indeed required) for you to put others at even great risk for your solely private benefit if your expected private gain outweighs the others' expected losses. However, such behavior, which treats others solely as a means to one's own ends, is condemned by common morality and the underlying principles of justice as a failure to properly respect the equal dignity and freedom of others. Recognizing this fact, defense lawyers carefully avoid making arguments to judges or jurors that seek to justify risks imposed on the plaintiff by allegedly greater enhancements of the defendant's utility. Defendants who are thought to have knowingly made such risk-utility decisions are often deemed by juries and judges not only to have been negligent, but also to have behaved so egregiously as to justify a hefty award of punitive damages, as occurred in the Ford Pinto, asbestos, and McDonald's coffee-spill cases

256 *Id.* at 676 (citation omitted).

257 Landes & Posner, *supra* note 4, at 104.

258 10 A.2d at 677.

259 *Id.*

in the United States.²⁶⁰ Indeed, such risk-utility decisions, whereby others are knowingly put at significant risk for the private economic benefit of the defendant, provide one of the few recognized bases for an award of punitive "exemplary" damages in England.²⁶¹

Thus, except for the cases involving on-premises risks to trespassers, in which the rights of the defendant landowner are paramount (*see supra* Section II.B.), the reported cases rarely involve situations in which the sole justification offered for the defendant's creation of significant risks to another is some private (economic or non-economic) benefit to the defendant. The private-benefit issue rather arises indirectly in situations involving participatory plaintiffs or socially valuable activities, in which, as we have seen, the creation of significant risks to others is deemed reasonable if and only if the risks are not too serious; they are necessary (unavoidable) in order for the participatory plaintiffs or everyone in society to obtain some desired benefit; they have been reduced to the maximum extent feasible without causing an unacceptable loss in the desired benefit; and they are significantly outweighed by the desired benefit. While the private benefits desired by those being put at risk and the equal-freedom enhancing benefits to everyone in society are taken into account, the purely private benefits to the defendant (or some third party) are not taken into account.²⁶²

Of the various cases discussed by Landes and Posner, the best-known one that comes closest to being a purely-private-benefit case is *Bolton v. Stone*,²⁶³ which was decided by the British House of Lords a few months

260 *See* *Grimshaw v. Ford Motor Co.*, 174 Cal. Rptr. 348 (Cal. App. 1981) (Ford Pinto); *Jackson v. Johns-Mansville Sales Corp.*, 781 F.2d 394, 399-409 & n.12 (5th Cir. 1986) (asbestos); *Liebeck v. McDonald's Restaurants, P.T.S., Inc.*, Civ. No. CV 93-02419, 1995 WL 360309 (N.M. Dist. Ct. Aug. 18, 1994) (McDonald's coffee spill) (discussed in *supra* note 43); sources cited *supra* note 6.

261 *See* *Rookes v. Bernard*, 1964 A.C. 1129, 1226-27 (Lord Devlin); Fleming, *supra* note 2, at 241 & n.152.

262 *See supra* Sections II.C., II.D., II.E. After examining all nineteenth-century California and New Hampshire appellate court decisions on tort liability, Gary Schwartz reported:

The factor of private profit was seen as a reason for being skeptical, rather than appreciative, of the propriety of risky activity engaged in by enterprise. In general, the California and New Hampshire Courts were reluctant to find that economic factors justified a defendant's risktaking. Neither court even once held mere monetary costs rendered nonnegligent a defendant's failure to adopt a particular safety precaution.

Schwartz, *Nineteenth-Century America*, *supra* note 148, at 1757 (footnote omitted).
263 1951 A.C. 850.

after its decision in *Paris*.²⁶⁴ The plaintiff, Miss Stone, was seriously injured by a cricket ball while standing on the road in front of her house. The ball had been hit out of the grounds of the defendant's cricket club, over a fence that separated the grounds from the house of Mr. Brownson, and over Mr. Brownson's house onto the road in front of Miss Stone's house, which was across the road from Mr. Brownson's house. The distance from the batter to the fence was about seventy-eight yards, and to the place where Miss Stone was hit, just under one-hundred yards. The road was a residential side street, infrequently occupied by persons or traffic. According to the evidence, balls had previously been hit into the road only about six times in twenty-eight years, and there had been no previous accident. The fence over which the cricket ball had traveled was only seven feet high but on an upward slope, so the top of the fence was some seventeen feet above the cricket pitch. The particular hit — a straight drive — was said to be altogether exceptional in comparison with anything previously seen on that ground, which had been in existence for over eighty years. The trial court found that the defendant had not been negligent. The Court of Appeal reversed the trial court. The House of Lords reinstated the trial court's decision.²⁶⁵

Without any discussion of the judges' opinions, Landes and Posner claim that *Bolton* is an example of the efficiency theory's aggregate risk-utility test:

The probability that a cricket ball would be hit so far and injure someone was remote. Moreover, the cost of avoiding the accident would have been substantial. The cricket grounds would have had to be enlarged or an extremely high fence erected or the players would have had to be instructed to hit the ball with less force — an instruction that would reduce the satisfactions of the game to both participants and spectators and would thus be costly.²⁶⁶

However, as is further discussed immediately below, each of the Law Lords explicitly or implicitly assumed that the defendant cricket club would

264 See *supra* text accompanying notes 207-21. *Paris* was decided in December 1950, *Bolton* in May 1951.

265 See 1951 A.C. at 851-52, 859 (Lord Porter); *id.* at 864 (Lord Reid); *id.* at 868 (Lord Radcliffe).

266 Landes & Posner, *supra* note 4, at 99. In a footnote, they state that the fence was on a rise "10 feet above the road on which the plaintiff was walking [and thus] was in effect 17 feet high." *Id.* at 99 n.32. The fence was on a rise ten feet above the level of the cricket pitch, not the road, which is the relevant measurement in terms of the fence's ability to prevent hit balls from escaping the grounds.

be liable for negligence if the risk to non-participants like Miss Stone were foreseeable and of a sufficiently high level, regardless of the expected utility to the participants or the burden of eliminating the risk. Each concluded that the risk was foreseeable, but not of a sufficiently high level to be deemed unreasonable as a matter of law, given the very low combined probability of, first, a ball's being hit into the road and, second, the ball striking someone on the little-used residential side street.²⁶⁷ Although several of the Law Lords stated that the risk must be "likely" or "probable," they clearly merely meant that the risk must be significant rather than remote or minimal. The literal (greater than 50%) interpretation of "likely" or "probable" would eliminate almost all negligence cases, which could hardly have been intended. Moreover, each of the Law Lords viewed the negligence issue in *Bolton* as one that could have been decided either way by the trial court, despite the minimal risk.²⁶⁸

Lord Reid was the most explicit. Using various adjectives — "likely," "probable," "substantial," or "material" — to describe the kind of risk required to give rise to a duty to take precautions to avert the risk,²⁶⁹ he eventually concluded, "What a man must not do, and what I think a careful man tries not to do, is to create a risk which is substantial."²⁷⁰ Describing the injury that occurred to Mrs. Stone as "readily foreseeable" yet with a "very small" probability of occurrence,²⁷¹ he stated,

[T]he test to be applied here is whether the risk of damage to a person on the road was so small that a reasonable man in the position of the [defendants], considering the matter from the point of view of safety, would have thought it right to refrain from taking steps to prevent the danger.

267 Mr. Brownson testified that balls had hit his house or come into his yard five or six times during the preceding few years, but the Law Lords focused on the risks of a ball's reaching and hitting someone in the road rather than on its injuring persons or property short of the road. 1951 A.C. at 851-52, 859 (Lord Porter).

268 Thus, it is not the case, as Stephen Gilles argues, that any of the Law Lords in *Bolton* "adopt[ed] a high threshold for reasonable foreseeability" or that any of their positions in *Bolton* differed significantly from Lord Reid's. Gilles, *English Negligence Law*, *supra* note 11, at 525, 527, 530, 562. To the contrary, given the extremely low risk and the ineffectiveness of any precautions other than foregoing playing cricket on the grounds, it is remarkable that all the judges considered the negligence issue to be one that could have been decided either way. Strict liability instincts may have been at work. *See infra* note 284.

269 1951 A.C. at 864-67.

270 *Id.* at 864, 867.

271 *Id.* at 864.

In considering that matter I think that it would be right to take into account not only how remote is the chance that a person might be struck but also how serious the consequences are likely to be if a person is struck; but I do not think that it would be right to take into account the difficulty of remedial measures. If cricket cannot be played on a ground without creating a substantial risk, then it should not be played there at all. ... It is not an easy question and it is one on which opinions may well differ. I can only say that having given the whole matter repeated and anxious consideration I find myself unable to decide this question [as a matter of law] in favor of the [plaintiff]. But I think that this case is not far from the borderline. ... I would have reached a different conclusion if I had thought that the risk here had been other than extremely small, because I do not think that a reasonable man considering the matter from the point of view of safety would or should disregard any risk unless it is extremely small.²⁷²

Lord Porter, noting that the risk of injury to someone in the road was a "conceivable possibility," stated,

It is not enough that the event should be such as can reasonably be foreseen; the further result that injury is likely to follow must also be such as a reasonable man would contemplate, before he can be convicted of actionable negligence. Nor is the remote possibility of injury occurring enough; there must be a sufficient probability to lead a reasonable man to anticipate it.²⁷³

Yet, like Lord Reid, he viewed the case as one that could have been decided either way by the trial judge,²⁷⁴ and he declared,

I cannot accept the view [stated by Justice Singleton in the Court of Appeal] that it would tend to exonerate the appellants if it were proved that they had considered the matter and decided that the risks were very small and that they need not do very much. In such a case I can imagine it being said that they entertained an altogether too optimistic outlook. They seem to me to be in a stronger position, if the risk was so small that it never even occurred to them.²⁷⁵

Lord Normand began his opinion by stating that "[t]here can be no quarrel"

272 *Id.* at 867-68.

273 *Id.* at 858.

274 *Id.* at 858-59.

275 *Id.* at 859.

with the Court of Appeal's statement that the defendants had "'a duty to prevent balls being hit into [the road] so far as there was any reasonably foreseeable risk of that happening.'" ²⁷⁶ Admitting that the plaintiff's injury was foreseeable, he added, "[B]ut one must not overlook the importance of the qualification 'reasonably'." ²⁷⁷ Like Lord Porter, he disagreed with Justice Singleton's statement in the Court of Appeal "that the defendants might have escaped liability if ... they had considered the matter and decided that the risks were so small that nothing need be done, but that since they did not consider it at all they must bear the consequences," since "the consequences of failing to consider a risk and of considering the risk but deciding to do nothing are the same." ²⁷⁸ After quoting statements from prior cases, that one is only required to foresee consequences that are "probable" or "likely," Lord Normand stated,

It is perhaps not surprising that there should be differences of opinion about the defendants' liability even if the correct test is applied. The whole issue is, indeed, finely balanced. On the one side there are, as we were told, records of much longer hits [on other grounds] by famous cricketers Again, the serious injury which a cricket ball might cause must not be left out of account. But on the other side the findings of fact show that the number of balls driven straight out of the ground by the players who use it in any given cricket season is so small as to be almost negligible, and the probability of a ball so struck hitting anyone in [the road] is very slight. The issue is thus one eminently appropriate for the decision of a jury, and [the trial judge sitting without a jury] dealt with it as a jury would [I]t is unfortunate that the Court of Appeal should have reversed the decision. ²⁷⁹

Subsequently, Lord Normand added,

The precautions suggested by the plaintiff, being either the moving of the wickets a few steps further away from [the road] end or the heightening of the fencing, would have had little or no effect in averting the peril. The only practical way in which the possibility of danger could have been avoided would have been to stop playing cricket on this ground. I doubt whether that fairly comes within paragraph (c) of the particulars of negligence — "failure to ensure that cricket balls

²⁷⁶ *Id.* at 860 (quoting *Stone v. Bolton*, [1950] 1 K.B. 201, 210 (Jenkins, L.J.)).

²⁷⁷ *Id.*; *see id.* at 860-61.

²⁷⁸ *Id.* at 862 (citing [1950] 1 K.B. at 207 (Singleton, L.J.)).

²⁷⁹ *Id.* at 861-62.

would not be hit into the said road". That seems to point to some unspecified method of stopping balls from reaching the road while a game is in progress on the ground. But whatever view may be taken on these matters, my conclusion is that the decision of [the trial judge] should have been respected as equivalent to a verdict of a jury on a question of fact.²⁸⁰

Lord Oaksey, agreeing that the risk was foreseeable, stated, "[A]n ordinarily careful man does not take precautions against every foreseeable risk. ... He takes precautions against risks which are reasonably likely to happen. Many foreseeable risks are extremely unlikely to happen and cannot be guarded against except by almost complete isolation."²⁸¹ Viewing the risks in this case as "negligible," he concluded that "in this difficult case ... [the trial judge's] decision ought to be restored."²⁸²

Lord Radcliffe stated that the risk of the accident, although reasonably foreseeable, was "very remote," so that "a reasonable man ... would not have felt himself called upon either to abandon the use of the ground for cricket or to increase the height of his surrounding fences."²⁸³ He therefore agreed with the restoration of the judgment for the defendant, but remarked,

I agree with regret, because I have much sympathy with the decision that commended itself to the majority of the Court of Appeal. I can see nothing unfair in the [defendants'] being required to compensate the [plaintiff] But the law of negligence is concerned less with what is fair than with what is culpable, and I cannot persuade myself that the [defendants] have been guilty of any culpable act or omission in this case.²⁸⁴

280 *Id.* at 862-63.

281 *Id.* at 863.

282 *Id.*

283 *Id.* at 868, 869.

284 *Id.* at 868. Contrary to Lord Radcliffe's statement, tort law *is* concerned with what is fair (just) rather than (ordinarily) what is culpable. Given the "extremely small" foreseeable risk, none of the Law Lords felt that they could overrule, as unreasonable, the trial judge's finding of no negligence. They also rejected the plaintiff's strict liability claim that was based on the ultrahazardous-activity doctrine established in *Rylands v. Fletcher*, 3 L.R.-E. & I. App. 330 (1868). See *Bolton*, 1951 A.C. at 856, 867 (Lord Porter, Lord Reid). An activity is deemed ultrahazardous only if there is a strong probability of serious injury if something should escape from the defendant's control. See Restatement of Torts §§ 519, 520 (1938); Keeton et al., *supra* note 2, § 78, at 555-56. The operation of the cricket ground in *Bolton* did not satisfy this requirement, since the probability was slight that a ball would hit anyone in the road if it were to escape the cricket grounds. Yet

Bolton was further explained and distinguished in a Privy Council decision in a Commonwealth case on appeal from Australia, *Overseas Tankship (U.K.) Ltd. v. The Miller Steamship Co. (The Wagon Mound (No. 2))*.²⁸⁵ The plaintiffs' two ships were extensively damaged by a fire that resulted from the ignition of a large quantity of furnace oil, which is "very difficult to ignite on water," that overflowed and spilled into Sydney Harbor while it was being loaded into the defendant's ship.²⁸⁶ Lord Reid, in an opinion joined by all the other Law Lords, held that the defendant was liable for negligence despite the "remote" and "very exceptional" nature²⁸⁷ of the foreseeable risk:

Before *Bolton v. Stone* the cases had fallen into two classes: (1) those where, before the event, the risk of its happening would have been regarded as unreal either because the event would have been thought to be physically impossible or because the possibility of its happening would have been regarded as so fantastic or far-fetched that no reasonable man would have paid any attention to it — "a mere possibility which would never occur to the mind of a reasonable man" — or (2) those where there was a real and substantial risk or chance that something like the event which happens might occur, and then the reasonable man would have taken the steps necessary to eliminate the risk.

Bolton v. Stone posed a new problem. ... [I]t could not have been said to be a far-fetched or fantastic possibility that [a ball would be driven on to the road and] would strike someone in the road

there was another factor in *Bolton*, which was noted by the plaintiff's counsel and several of the judges, that might explain the feeling among many that the cricket club should have been held liable despite the lack of negligence. The cricket club knew not only that balls might escape its grounds and injure someone, but also (unlike the ultrahazardous activity cases) that the rules of cricket *encouraged* batters to hit the ball out. That is, although the risk of a ball escaping into the road and hitting someone was very small, it was knowingly pursued as an integral part of the defendant's activity. See *Bolton*, 1951 A.C. at 853 (Nelson, K.C., et al.); *id.* at 858 (Lord Porter); *id.* at 862 (Lord Normand); *cf. id.* at 868 (Lord Radcliffe) (stating that the case is "a peculiar one, not easily related to the general rules that govern liability for negligence"). The Cricket Clubs of England eventually saw to it that Miss Stone was compensated. See Arthur L. Goodhart, *Is It Cricket?*, 67 Law Q. Rev. 460 (1951); Dennis Lloyd, Case Note, 14 Mod. L. Rev. 499 (1951); Note, 68 Law Q. Rev. 3 (1952).

285 1967 A.C. 617 (P.C. 1966) (appeal taken from B.C.).

286 *Id.* at 632-33.

287 *Id.* at 633.

So it could not have been said that, on any ordinary meaning of the words, the fact that a ball might strike a person in the road was not foreseeable or reasonably foreseeable — it was plainly foreseeable. But the chance of its happening in the foreseeable future was infinitesimal. A mathematician given the data could have worked out that it was only likely to happen once in so many thousand years. The House of Lords held that the risk was so small that in the circumstances a reasonable man would have been justified in disregarding it and taking no steps to eliminate it.

But it does not follow that, no matter what the circumstances may be, it is justifiable to neglect a risk of such a small magnitude. A reasonable man would only neglect such a risk if he had some valid reason for doing so, e.g., that it would involve considerable expense to eliminate the risk. He would weigh the risk against the difficulty of eliminating it. If the activity which caused the injury to Miss Stone had been an unlawful activity there can be little doubt but that *Bolton v. Stone* would have been decided differently. In their Lordships' judgment *Bolton v. Stone* did not alter the general principle that a person must be regarded as negligent if he does not take steps to eliminate a risk which he knows or ought to know is a real risk and not a mere possibility which would never influence the mind of a reasonable man. What that decision did was to recognise and give effect to the qualification that it is justifiable not to take steps to eliminate a real risk if it is small and if the circumstances are such that a reasonable man, careful of the safety of his neighbour, would think it right to neglect it.

In the present case there was no justification whatever for discharging the oil into Sydney Harbour. Not only was it an offense to do so, but it involved considerable loss financially. If the ship's engineer had thought about the matter there could have been no question of balancing the advantages and disadvantages. From every point of view it was both his duty and his interest to stop the discharge immediately.²⁸⁸

In his book *Economic Analysis of Law*, Posner briefly refers to the House of Lord's decision in *The Wagon Mound (No. 2)*. He mentions only the first three sentences in the third paragraph of the text quoted above, which he treats as a supposed affirmation of the general applicability of the Hand

288 *Id.* at 641-43 (citations omitted).

formula's aggregate-risk-utility test of negligence.²⁸⁹ He ignores Lord Reid's immediately preceding and following statements of the "general principle" that a person is negligent if she fails to take steps to eliminate a "real" risk that is substantial, rather than "small" or "infinitesimal," and he fails to note that precaution costs are mentioned as being relevant only if the risk is "small" (insignificant, remote, infinitesimal, etc.) and it would involve *considerable* expense to eliminate the risk. Rather than being a general test of negligence, this limited "weighing" of the risk and the precaution costs is mentioned only for real but remote or insubstantial risks, and it is used to *expand* defendants' liability, by extending negligence liability to situations in which the risk ordinarily would be deemed non-negligent because it is remote or insubstantial, but nevertheless is deemed negligent because it is real rather than fantastic and there is no good reason for the creation of the risk.²⁹⁰

Landes and Posner also discuss an American escaped-ball case, *Nussbaum v. Lacopo*,²⁹¹ in which the plaintiff was severely injured by a golf ball that was hit, by an "extraordinarily misdirected shot attaining great height," over a dense stand of full-foliaged trees 45-60 feet high into the plaintiff's backyard.²⁹² They treat the case as another supposed example of the aggregate-risk-utility test of negligence.²⁹³ However, the majority of the New York Court of Appeals did not engage in any risk-utility balancing, but rather held that the defendant was not negligent because such a shot was unforeseeable, given the geography and prior experience (no other ball had ever been hit over the trees).²⁹⁴ In addition, the majority treated the plaintiff as a participatory plaintiff. When discussing the plaintiff's nuisance claim due to balls occasionally being hit through the dense 20-to-30-feet-wide rough below the trees and being found in the bushes along the fence line, they stated that, unlike a traveler on the highway, "one who deliberately decides to reside in the suburbs on very desirable lots adjoining golf clubs and thus receive the social benefits and other not inconsiderable advantages of country club surroundings must accept the occasional, concomitant annoyances."²⁹⁵ Three judges dissented, arguing that there was sufficient evidence to allow a jury to find that the risk was foreseeable and negligent, that "[t]he right to safety of a

289 Posner, *Economic Analysis*, *supra* note 23, at 183.

290 For similar statements by American courts, see our prior discussion of the *Perotti* and *Adams* cases in *supra* text accompanying notes 198-201, 244-47.

291 265 N.E.2d 762 (N.Y. 1970).

292 *See id.* at 764, 767.

293 *See* Landes & Posner, *supra* note 4, at 98-99.

294 265 N.E.2d at 765-67 (Burke, J., joined by Fuld, C.J., and Scileppi and Jasen, JJ.).

295 *Id.* at 765.

man sitting on the patio of his home would seem to be at least as great as that of the traveler on a highway,"²⁹⁶ and that "[n]o social or other benefit has come to plaintiff because the club owned adjacent land. This record demonstrates, on the contrary, not only a disadvantage but a safety hazard."²⁹⁷

Stephen Gilles, who once argued that Lord Reid's formulation of the negligence issue in *Bolton* was an example of the efficiency theory's cheapest cost-avoider criterion for imposing tort liability,²⁹⁸ now agrees that "Lord Reid intended to rule out balancing above the threshold of substantial risk" in both *Bolton* and *The Wagon Mound (No. 2)*.²⁹⁹ Yet Gilles correctly points out that neither Lord Reid nor the other Law Lords viewed the "substantial foreseeable risk" test as the universal test of negligence, since in other opinions involving the creation of substantial foreseeable risks, they and other judges have considered the burden of taking precautions in deciding whether the defendants were negligent.³⁰⁰ While Gilles describes the opinions in these other cases as employing "disproportionate-cost balancing" or even "cost-benefit balancing," they are all cases involving participatory plaintiffs or socially valuable activities in which the courts explicitly or implicitly employed the non-balancing, prohibitive-cost test, as discussed in Sections II.C., D., and E. above.³⁰¹ In each case in which the defendant created a substantial foreseeable risk to a non-participatory plaintiff that was not an inevitable aspect of a socially valuable activity, the defendant was found negligent.³⁰²

Gilles observes that "English judges are more comfortable formulating the

296 *Id.* at 768 (Bergan, J., joined by Breitel and Gibson, JJ.)

297 *Id.* at 769.

298 See Stephen G. Gilles, *Negligence, Strict Liability, and the Cheapest Cost-Avoider*, 78 Va. L. Rev. 1291, 1336-40 (1992).

299 Gilles, *English Negligence Law*, *supra* note 11, at 529; see *id.* at 492, 559, 561-62.

300 See *id.* at 492-93, 529 n.147, 531-59, 572-78.

301 See *id.* at 531-59, 567-70; Wright, *supra* note 14, at 435-41.

302 See Gilles, *English Negligence Law*, *supra* note 11, at 553-56 (discussing *Carmarthenshire County Council v. Lewis*, 1955 A.C. 549); *id.* at 556-59 (discussing *Haley v. London Elec. Bd.*, 1965 A.C. 778 (1964)); *id.* at 575 (discussing *Crown River Cruises Ltd. v. Kimbolton Fireworks Ltd.*, [1996] 2 Lloyd's Rep. 533 (Q.B.D. Comm. Ct.)). In *Haley*, Lord Reid stated that the defendant electricity provider would be negligent for failing to set up an adequate barricade in front of its trench unless "the chance of a blind man coming there was *so small* and the difficulty of affording protection to him *so great* that it would have been in the circumstances unreasonable to afford that protection." 1965 A.C. at 791 (emphasis added).

duty of care in balancing terms in contractual settings, such as the employer-employee relationship in *Paris*, than in 'stranger' cases such as *Bolton*.³⁰³ In every escaping-ball case discussed by Gilles, except *Bolton*, the defendants were found negligent, even in cases in which the burden of the precautions required to avert the risk was deemed prohibitive or infeasible.³⁰⁴ Some of the judges in these cases referred to the burden of precaution, while others did not.³⁰⁵ This is understandable. Although not as clearly socially important as, e.g., public utilities and transportation facilities, ball-playing and similar sporting activities, especially in established venues, can be viewed as socially valuable activities that provide important recreational and other benefits to the general public and therefore subject to the non-balancing, prohibitive-cost test of negligence.

Thus, in *Miller v. Jackson*,³⁰⁶ another escaping cricket ball case, Lord Denning began his opinion by stating, "In summertime village cricket is the delight of everyone. Nearly every village has its own cricket field where the young men play and the old men watch."³⁰⁷ He pointed out that cricket had been played on the defendant cricket club's ground by the village team for some seventy years; the plaintiffs had knowingly purchased their home adjacent to the cricket ground in a new residential development that previously had been a cow pasture; the club had done "everything possible short of stopping playing cricket on the ground" to reduce the number of balls hit onto the plaintiffs' property, including building a fence of maximum feasible height and instructing batters "to try to drive the balls low for four and not hit them up for six"; there was no apparent alternative location to which the club could move; and the club had offered to strengthen and shield the plaintiffs' windows, protect their backyard with an overarching net or wire mesh during play, and pay for any damages caused.³⁰⁸ Viewing the case as "a contest ... between the interest of the public at large; and the interest of a private

303 Gilles, *English Negligence Law*, *supra* note 11, at 516.

304 See *id.* at 579-81 (discussing *Hilder v. Assoc. Portland Cement Mfrs., Ltd.*, [1961] 3 All E.R. 709 (Q.B.) (football); *Lamond v. Glasgow Corp.*, 1968 S.L.T. 291 (O.H.) (Lord Thompson) (golf); *Whitefield v. Barton*, 1987 S.C.L.R. 259 (Sheriff Ct.) (golf); and *Miller v. Jackson*, [1977] 1 Q.B. 966 (C.A.) (cricket)).

305 See Gilles, *English Negligence Law*, *supra* note 11, at 571-72 ("one can argue that in true *Bolton* cases — that is, cases in which an activity on the defendant's land causes harm to persons on the highway, or on adjacent property — there is some tendency to employ the substantial risk approach, though even here the evidence is mixed").

306 [1977] 1 Q.B. 966 (C.A.).

307 *Id.* at 976.

308 *Id.* at 976-77, 982.

individual," Denning stated that "[t]he *public* interest lies in protecting the environment by preserving our playing fields in the face of mounting development, and by enabling our youth to enjoy all the benefits of outdoor games, such as cricket and football."³⁰⁹ Quoting Lord Reid's statement in *Bolton*, "If cricket cannot be played on a ground without creating a substantial risk, then it should not be played there at all," he stated, "I would agree with that saying if the houses or road was there first, and the cricket ground came there second."³¹⁰ As it was, however, he found the defendant's conduct reasonable, refused to grant an injunction, and would have refused to grant damages in lieu of an injunction if not for the club's "very fairly" offering to pay.³¹¹ Geoffrey Lane, L.J., agreed with Denning that the equities favored the defendant, but nevertheless found that "[t]he risk of injury to person and property is so great that on each occasion when a ball comes over the fence and causes damage to the plaintiffs, the defendants are guilty of negligence"³¹² and that the past and continuing intrusions constituted a nuisance that should be enjoined, after giving the defendants a year "to look elsewhere for an alternative pitch."³¹³ Cumming-Bruce, L.J., agreed with Geoffrey Lane's findings of negligence and nuisance, but considering the public's interest and the plaintiffs' knowingly locating next to and taking advantage of the adjacent open space (the cricket ground), he agreed with Denning in refusing to grant an injunction.³¹⁴

In only one of the British cases discussed by Gilles did the defendants attempt to raise their own private "economic advantage," rather than some benefit to the general public or to those being put at risk, to justify imposing a significant foreseeable risk on a non-participatory plaintiff. As in the American cases, the court summarily rejected the defendants' argument: "[T]he defenders were not entitled to put their neighbours at risk because of an economic advantage."³¹⁵

G. Protecting Oneself against Others' Possible Negligence

The principal case involving the issue of plaintiffs' alleged contributory

309 *Id.* at 981 (emphasis in original).

310 *Id.* at 977.

311 *Id.* at 978.

312 *Id.* at 985.

313 *Id.* at 987.

314 *See id.* at 987, 989.

315 *H. & A. Scott v. J. Mackenzie Stewart Co.*, 1972 S.L.T. (Notes) 69 (discussed in Gilles, *English Negligence Law*, *supra* note 11, at 577 n.371).

negligence that is discussed by Landes and Posner is a famous case decided by the United States Supreme Court, *LeRoy Fibre Co. v. Chicago, Milwaukee & St. Paul Railway*.³¹⁶ The plaintiff established a factory adjacent to the defendant's existing railroad tracks to manufacture tow from flax straw. It stored the flax straw on its property in 230 several-ton stacks, which were arranged in two rows 10 to 15 feet apart parallel with the railroad right of way. The first row of stacks nearest the railroad was 20 to 25 feet from the boundary of the railroad right of way and 70 to 75 feet from the center of the railroad tracks. Flax straw is easily ignited and burned. One very windy day, a fire started in one of the stacks in the second row and spread to and consumed all the stacks. There was substantial evidence "that the fire was started by a locomotive engine of defendant which had just passed and that through the negligent operation of defendant's employés in charge, it emitted large quantities of sparks and live cinders which were carried to the straw stack by a high wind then prevailing."³¹⁷ The defendant contended that the plaintiff was contributorily negligent for placing the inflammable stacks of flax straw near (within 100 feet of) the railroad tracks. The trial court submitted the question of the defendant's negligence and the plaintiff's negligence to the jury, asking whether each had failed to use the care "that a person of ordinary prudence would have used under like circumstances."³¹⁸ The jury found that each was negligent and, since the plaintiff's contributory negligence was then a complete defense, returned a verdict for the defendant.³¹⁹

Landes and Posner construct a hypothetical based on the facts in *LeRoy Fibre* to demonstrate that the courts implicitly use the Hand formula to evaluate the alleged negligence of both plaintiffs and defendants and thereby achieve the efficient result.³²⁰ The hypothetical is a slightly modified version of the hypothetical that is used for the same purpose (but without any citation to *LeRoy Fibre*) in the various editions of Posner's text, *Economic Analysis of Law*.³²¹ The version in Posner's text, which employs a more complete set of options, will be discussed here. In Posner's hypothetical, a farmer facing a \$150 expected loss due to his stacks of flax being destroyed by a fire started by sparks from the defendant's adjacent railroad operation can place his stacks of flax 0, 75, or 200 feet from the railroad track, and the railroad can use a super spark arrester (Super S.A.), an ordinary spark arrester (S.A.), or no spark

316 232 U.S. 340 (1914).

317 *Id.* at 341-42.

318 *Id.* at 342-43.

319 *Id.* at 343.

320 Landes & Posner, *supra* note 4, at 88-90.

321 See, e.g., Posner, *Economic Analysis*, *supra* note 23, § 6.4, at 186-87.

arrester (No S.A.). The costs of different possible combinations of precaution by the farmer and the railroad that will avoid the expected loss of \$150 are:

	Option 1 <i>Super S.A., 0'</i>	Option 2 <i>S.A., 75'</i>	Option 3 <i>No S.A., 200'</i>
Railroad care	\$100	\$50	\$ 0
Farmer care	<u>0</u>	<u>25</u>	<u>110</u>
Total cost	100	75	110

As is almost always true, the efficient (least total cost) option is the option that requires precaution by both parties — Option 2 — rather than the options (1 and 3) that require unilateral precaution by one or the other party. Yet, applying the Hand formula to each party's conduct, the railroad would be deemed negligent if it did not adopt Option 1, since the \$100 precaution (B) is less than the expected \$150 loss (P times L), and the farmer would be deemed negligent if he did not adopt Option 3, since the \$110 precaution (B) also is less than the expected \$150 loss (P times L). Under the traditional negligence liability rule, according to which the plaintiff cannot recover if he is contributorily negligent, the railroad will not take any precaution, since it knows the farmer either will adopt Option 3, in which case there will be no loss and hence no liability, or will not adopt Option 3 and will be barred from recovering any damages due to his contributory negligence. The farmer, knowing that the railroad has no (economic) reason to take any precaution, therefore will adopt Option 3 — that is, spend \$110 to avoid the expected \$150 loss. Thus, using the Hand formula to determine whether each party's conduct was negligent results in the least efficient option being chosen, rather than the most efficient.

Landes and Posner attempt to avoid this embarrassing result by relying on the principle affirmed by all the justices in *LeRoy Fibre* (although they only cite Justice Holmes' concurring opinion): a person ordinarily is legally entitled to assume that others will not tortiously put his person or property at risk.³²² They claim that "[t]he negligence-contributory negligence approach, defined in marginal Hand formula terms, yields optimal [efficient] results so long as the law applies the Hand formula to each party *on the assumption that the other party is exercising due care*."³²³ However, this supposed solution is hopelessly circular. Using the Hand formula to identify the first

322 Landes & Posner, *supra* note 4, at 89. *But see infra* text accompanying notes 462-66.

323 Landes & Posner, *supra* note 4, at 88; *see also id.* at 91; Posner, *Economic Analysis*, *supra* note 23, at 170.

party's efficient precaution level requires first knowing the second party's efficient precaution level, but the second party's efficient precaution level can be identified only if the first party's efficient precaution level is known, and so on around the circle. To achieve the efficient result, negligence must be defined not as a failure to satisfy the Hand formula, but rather as a failure to adopt the efficient level of precaution. As in the flax-railroad hypothetical, this efficient level can only be identified (theoretically but not practically³²⁴) by considering all the expected costs and benefits to the defendant and the plaintiff (and others) of all the possible combinations of precaution by the defendant and the plaintiff (and others) and then choosing the least cost option, rather than by applying the Hand formula separately to each party.

More significantly for our purposes, Landes and Posner completely ignore the Supreme Court's holding and rationale in *LeRoy Fibre*. Rather than attempting to identify the efficient (least-cost) combination of precautions by the plaintiff manufacturer and the defendant railroad, the Court explicitly relies on an emphatic rights-based rationale to hold that the plaintiff could

324 As Landes and Posner acknowledge, to identify the efficient levels of precaution, one must focus on *marginal* increments in costs and benefits attributable to *marginal* increments in precaution, rather than the total costs and benefits of some particular suggested precaution. Landes & Posner, *supra* note 4, at 87; see Posner, *Economic Analysis*, *supra* note 23, § 6.1, at 180; John Prather Brown, *Toward An Economic Theory of Liability*, 2 J. Legal Stud. 323, 332-34 (1973). Landes and Posner assert, "[W]e find that the courts do consider marginal rather than total values in applying [the Hand formula]." Landes & Posner, *supra* note 4, at 87. Yet they themselves subsequently admit that "[c]ourts ordinarily do not consider technological possibilities [such as posting a warning sign rather than constructing a fence] not urged by one of the parties." *Id.* at 98; see Mark F. Grady, *A New Positive Economic Theory of Negligence*, 92 Yale L.J. 799, 806-09, 821-29 (1983); Mark F. Grady, *Untaken Precautions*, 18 J. Legal Stud. 139 (1989); *supra* text accompanying note 259. Moreover, as Hand emphasized and Landes and Posner also admit, the necessary quantitative information will never be available for even a total, much less marginal, risk-utility analysis. See Landes & Posner, *supra* note 4, at 20-21 ("Rarely will there be enough information about the costs and benefits of alternative safety measures to enable a confident judgment that the court's solution is the efficient one."); *id.* at 24 (same); Posner, *Economic Analysis*, *supra* note 23, at 192-93 (discussing the distinction between the level of activity and the level of care and noting that "[j]udicial inability to determine optimal activity levels except in simple cases is potentially a serious shortcoming of a negligence system"); *supra* text accompanying notes 83, 111; *infra* text accompanying note 448. Attempting to calculate and enforce efficient precaution levels based on incomplete and highly imperfect information may very well lead to greater inefficiency rather than greater efficiency, even assuming that some determinate answer is suggested by the available (imperfect) information. See Brown, *supra*, at 332-33, 343-44, 346-47.

not be found negligent no matter how close the flax stacks on its property were to the railroad tracks.³²⁵

[T]he use of the [plaintiff's] land was of itself a proper use — it did not interfere with nor embarrass the rightful operation of the railroad. It is manifest, therefore, [that the basic issue is] whether one is limited in the use of one's property by its proximity to a railroad; or, to limit the proposition to the case under review, whether one is subject in its use to the careless as well as to the careful operation of the road. ... That one's uses of his property may be subject to the servitude of the wrongful use by another of his property seems an anomaly. It upsets the presumptions of law and takes from him the assumption and the freedom which comes from the assumption, that the other will obey the law, not violate it. It casts upon him the duty of not only using his own property so as not to injure another, but so to use his own property that it may not be injured by the wrongs of another. How far can this subjection be carried? ... Houses may be said to be inflammable, and may be, as they have been, set on fire by sparks and cinders from defective or carelessly handled locomotives. Are they to be subject as well as stacks of flax straw, to such lawless operation? And is the use of farms also, the cultivation of which the building of the railroad has preceded? ... [T]he rights of one man in the use of his property cannot be limited by the wrongs of another. ...

The legal conception of property is of rights. When you attempt to limit them by wrongs, you venture a solecism. If you declare a right is subject to a wrong you confound the meaning of both. It is difficult to deal with the opposing contention. There are some principles that have axiomatic character. The tangibility of property is in its uses and that the uses by one owner of his property may be limited by the wrongful use of another owner of his, is a contradiction.³²⁶

325 This holding clearly rejects the rule asserted by Posner in his initial article on negligence. Posner, *Theory of Negligence*, *supra* note 23, at 60 ("the farmer was responsible for not stacking ricks and other highly inflammable material too near the tracks during the dry season").

326 *LeRoy Fibre Co.*, 232 U.S. at 349-50. Justice Holmes, joined by Chief Justice White, concurred and dissented. He agreed,

for the purposes of argument, that as a general proposition people are entitled to assume that their neighbors will conform to the law; that a negligent tort is unlawful in as full a sense as a malicious one, and therefore that they are entitled to assume that their neighbors will not be negligent.

Id. at 352. However, he argued that the plaintiff should be deemed contributorily negligent and barred from recovery if the flax were stacked "so near to a railroad

The principles affirmed in *LeRoy Fibre* are widely recognized. Regardless of the balance of risks and utilities, a possessor of land is not required to forego use of his land or otherwise to incur significant burdens in order to protect his property against possible tortious conduct by others. More generally, a person is not required to take precautions to protect his person or property against possible tortious conduct by others if the necessary precautions would constitute a significant burden on the plaintiff's rights in his person or property.

H. Rescuers and Non-Rescuers

Landes' and Posner's discussion of the courts' treatment of the alleged contributory negligence of rescuers suffers from similarly serious analytic and descriptive flaws. They focus on a case, *Eckert v. Long Island Railroad Co.*,³²⁷ that is frequently cited as an illustration of the courts' supposed use of the aggregate-risk-utility test. The plaintiff's husband, Henry Eckert, saw a three- or four-year-old child sitting or standing on a railroad track in the path of the defendant's negligently operated train. He ran to the track "and seizing [the child], threw it clear of the track on the side opposite to that from which he came; but continuing across the track himself, was struck by the step or some part of the locomotive or tender, thrown down, and received injuries from which he died the same night."³²⁸ The court upheld the jury's finding that Eckert was not negligent:

[H]ad he for his own purposes attempted to cross the track, or with a view to save property placed himself voluntarily in a position where he might have received an injury from a collision with the train, his conduct would have been grossly negligent, and no recovery could have been had for such injury. But the evidence further showed that there was a small child upon the track, who, if not rescued, must have been inevitably crushed by the rapidly approaching train. This the deceased saw, and he owed a duty of important obligation to this

that it obviously was likely to be set fire to by a well-managed train." *Id.* at 352-53. Holmes' argument would have been stronger and likely more successful had it been phrased as a defect in the plaintiff's *prima facie* case against the defendant rather than as contributory negligence by the plaintiff. If the flax would have been destroyed even if the defendant's train had not been operated negligently, then the *prima facie* case against the defendant should have failed due to a lack of proximate causation.

327 43 N.Y. 502 (1871).

328 *Id.* at 503-04.

child to rescue it from its extreme peril, if he could do so without incurring great danger to himself. ... Under the circumstances in which the deceased was placed, it was not wrongful in him to make every effort in his power to rescue the child, compatible with a reasonable regard for his own safety. It was his duty to exercise his judgment as to whether he could probably save the child without serious injury to himself. If, from the appearances, he believed that he could, it was not negligence to make an attempt to do so, although believing that possibly he might fail and receive an injury himself. ... The law has so high a regard for human life that it will not impute negligence to an effort to preserve it, unless made under such circumstances as to constitute rashness in the judgment of prudent persons. For a person engaged in his ordinary affairs, or in the mere protection of property, knowingly and voluntarily to place himself in a position where he is liable to receive a serious injury, is negligence, which will preclude a recovery for an injury so received; but when the exposure is for the purpose of saving life, it is not wrongful, and therefore not negligent unless such as to be regarded either rash or reckless.³²⁹

Two judges dissented, arguing that Eckert had knowingly and voluntarily assumed the risk. However, they agreed with the majority that Eckert was not contributorily negligent; rather, his attempt to rescue the child "was a praiseworthy act" and "was lawful as well as meritorious."³³⁰

Professor Henry Terry, who is generally credited with having first proposed the aggregate-risk-utility test, used the *Eckert* case to illustrate the test in his influential 1915 article that led to the test's adoption in the first Restatement.³³¹ According to Terry's expanded formulation of the test, the reasonableness of a person's conduct is evaluated by balancing the foreseeable

329 *Id.* at 505-06.

330 *Id.* at 506, 508 (Allen and Folger, JJ., dissenting).

331 Henry T. Terry, *Negligence*, 29 Harv. L. Rev. 40, 42-44 (1915); see Laurence H. Eldredge, *Modern Tort Problems* 6 (1941); Gilles, *Hand Formula Balancing*, *supra* note 11, at 825-28; Green, *supra* note 6, at 1622-30; Kelley, *supra* note 2, at 746-48. The Restatement seems to apply its general aggregate-risk-utility test to situations like *Eckert*:

Whether a plaintiff is acting reasonably in exposing himself to a particular risk in order to protect a third person from harm depends upon the comparison between the extent of the risk and the gain to be realized by encountering it, which includes two things: first, the likelihood that the rescue will be successful and, second, the gravity of the peril in which the third person has been placed. Restatement (Second) of Torts § 472 cmt. a (1965).

risks created by the conduct ($P1$ times $L1$) against the conduct's expected utility ($P2$ times $P3$ times $L2$):

The reasonableness of a given risk may depend upon the following five factors:

- (1) The magnitude [probability $P1$] of the risk. ...
- (2) The value or importance [$L1$] of that which is exposed to the risk, which ... may be called the principal object. ...
- (3) A person who takes a risk of injuring the principal object usually does so because he has some reason of his own for such conduct, — is pursuing some object of his own. This may be called the collateral object. In some cases, at least, the value or importance [$L2$] of the collateral object is properly to be considered in deciding upon the reasonableness of the risk.
- (4) The probability [$P2$] that the collateral object will be attained by the conduct which involves risk to the principal [object]; the utility of the risk.
- (5) The probability [$P3$] that the collateral object would not have been attained without taking the risk; the necessity of the risk.

The [*Eckert*] case will serve as an illustration:

- (1) The magnitude of the risk was the probability that [*Eckert*] would be killed or hurt. That was very great.
- (2) The principal object was his own life, which was very valuable.
- (3) The collateral object was the child's life, which was also very valuable.
- (4) The utility of the risk was the probability that he could save the child. That must have been fairly great, since he in fact succeeded. Had there been no fair chance of saving the child, the conduct would have been unreasonable and negligent.
- (5) The necessity of the risk was the probability that the child would not have saved himself by getting off of the track in time.

Here, although the magnitude of the risk was very great and the principal object very valuable, yet the value of the collateral object and the great utility and necessity of the risk counterbalanced those considerations, and made the risk reasonable.³³²

Using the same expanded version of the test, Landes and Posner similarly argue:

332 Terry, *supra* note 331, at 42-44.

Let us translate the [Eckert] court's discussion into economic terms. ... [W]e may assume — plausibly enough on the facts — [the child] was certain to be killed unless rescued by Eckert [$P3 = 1$]. ... If the child's life and Eckert's life are assumed to have the same value [$L1 = L2$], the question whether Eckert was negligent is reduced to whether the probability of his rescuing the child [$P2$] was less than the probability of his being killed [$P1$]. ... In asking whether Eckert "could probably save the child without serious injury to himself," the court was comparing these probabilities; if Eckert could have saved the child without serious injury to himself, this implies that the probability of a successful rescue [$P2$] was greater than the probability of his being hit by the train himself [$P1$].³³³

These arguments are based on speculative and implausible assumptions. First, they assume that Eckert's life ($L1$) and the child's life ($L2$) are equally valuable. While this is a fundamental principle of the equal-freedom-based justice theory and of most countries' legal systems, it is an implausible assumption under a utilitarian or economic efficiency theory. Under the latter theories the lives will have different values, depending on the total aggregate utility each is expected to generate or on how much the person or others are willing and able to pay for the person's life.³³⁴ For example, the child may have been mentally and physically disabled, with very limited life prospects, while Eckert may have been a person upon whom many were or would be economically, emotionally, or socially dependent. Or vice versa.

Terry plausibly assumes that the necessity of rescuing the child ($P3$) is "great" (but not 100%) and the probability of Eckert's being hit ($P1$) was "very great." However, falling prey to the same error that Posner frequently makes — confusing *ex ante* probability with what actually happened *ex post* — Terry fallaciously assumes that the probability of the child's being saved ($P2$) "must have been fairly great, since [Eckert] in fact succeeded."³³⁵ Finally, he concludes that Eckert was not contributorily negligent because the risk to Eckert was "counterbalanced" by the utility and necessity of saving the

333 Landes & Posner, *supra* note 4, at 101.

334 The "willingness to pay" valuation method is part of Posner's wealth-based interpretation of economic efficiency. See Posner, *Economic Analysis*, *supra* note 23, § 1.2, at 13.

335 See *supra* text accompanying notes 177-78, 332; cf. Gilles, *Hand Formula Balancing*, *supra* note 11, at 826 n.39 (assuming that the "difference in the child's probability of survival attributable to Eckert's attempt to rescue it, multiplied by the value of the child's life, ... must have been fairly great, because Eckert did rescue the child") (emphasis omitted).

child's life. This conclusion does not follow from but rather is contradicted by his expanded risk-utility formula. Even assuming that $L1$ and $L2$ are equal (each being "very valuable"), the risk to Eckert ($P1$ times $L1$) exceeds the expected utility of the rescue attempt ($P2$ times $P3$ times $L2$), since $P1$ (which is "very great") presumably is greater than $P2$ (which is only "fairly great") and $P3$ (which is "great" but not certain) is less than one.

Landes and Posner implausibly assume that it is certain that the child will be killed in the absence of a successful rescue. The court did state that the child, "if not rescued, must have been inevitably crushed by the rapidly approaching train."³³⁶ Yet, there had to be some chance, no matter how slight, that the child, who was conscious, physically able, and sitting or standing unconstrained on the tracks, might on his own have gotten off the tracks between the time Eckert saw him on the tracks (and had to decide what to do) and the time the train hit Eckert. Having implausibly (under the utilitarian-efficiency view) treated the lives ($L1$ and $L2$) as equally valuable and the need for rescue ($P3$) as 100%, they focus on the comparative probabilities of the child's being rescued ($P2$) and the rescuer's being injured ($P1$). Noting the court's phrasing of the contributory negligence issue as whether Eckert "could probably save the child without serious injury to himself," Landes and Posner state that the court's finding of no contributory negligence "implies that the probability of a successful rescue [$P2$] was greater than the probability of his being hit by the train himself [$P1$]."³³⁷

However, unless Eckert abandoned the rescue attempt, the *ex ante* probability of his being hit by the train ($P1$) had to be at least as great as the probability of his rescuing the child ($P2$), since he would be exposed to the oncoming train while attempting to rescue the child and would have to get free of the tracks himself *after* rescuing the child or, at best, simultaneously with rescuing the child. On the actual facts, it seems clear that the *ex ante* probability of Eckert's being hit ($P1$) was greater than the *ex ante* probability of his rescuing the child ($P2$), since the attempt to rescue the child would necessarily leave Eckert exposed to the oncoming train for a longer time than would be required to rescue the child. The court states that Eckert ran to the tracks, threw the child across to the other side, and was struck by the train as he continued across the tracks himself.³³⁸

336 *Eckert v. Long Island R.R. Co.*, 43 N.Y. 502, 505 (1871); *see supra* text accompanying note 329.

337 *See supra* text accompanying note 333.

338 *See supra* text accompanying note 328.

He apparently barely had time to run to the tracks and, without slowing his momentum, to grab and throw or push the child across the tracks in front of him as he continued across the tracks. Thus, even assuming that Eckert's life and the child's life were equally valuable, the risk to Eckert ($P1$ times $L1$) clearly exceeded the expected utility of the rescue attempt ($P2$ times $P3$ times $L2$), since $P1$ was greater than (or at the least no less than) $P2$ and $P3$ (the necessity of rescuing the child — i.e., the probability that the child would not save himself) was less than one.³³⁹

Thus, if the *Eckert* court had actually used the aggregate-risk-utility test to evaluate Eckert's alleged negligence in attempting to rescue the child, Eckert should have been found negligent as a matter of law. Yet neither the majority nor the dissenting judges in *Eckert* thought that Eckert had been negligent. Rather, even the dissenting judges described Eckert's conduct as "praiseworthy" and "meritorious" rather than as negligent.³⁴⁰ The critical passage in the majority opinion, which is not mentioned by Landes and Posner, states:

The law has so high a regard for human life that it will not impute negligence to an effort to preserve it, unless made under such circumstances as to constitute *rashness* in the judgment of prudent persons. For a person engaged in his ordinary affairs, or in the mere protection of property, knowingly and voluntarily to place himself in a position where he is liable to receive a serious injury, is negligence, which will preclude a recovery for an injury so received; but when the exposure is for the purpose of saving life, it is not wrongful, and therefore not negligent unless such as to be regarded either *rash* or *reckless*.³⁴¹

This "rash or reckless" test, rather than the aggregate-risk-utility test, is the test that the courts employ to assess the reasonableness of putting oneself at risk in order to save the life of another. In these emergency rescue situations, the courts generally hold that, no matter how much the risk to the would-be rescuer may seem to exceed the expected benefit to the potential rescuee, the would-be rescuer's conduct is morally praiseworthy,

339 For example, if the lives ($L1$ and $L2$) were equally valuable, the probability of the child's not saving himself ($P3$) was 90% (0.9), the probability of Eckert's rescuing the child ($P2$) was 50% (0.5), and the probability of Eckert's being hit ($P1$) was 55% (0.55), then the risk to Eckert of the rescue attempt was $0.55L$ and the expected utility of the rescue attempt was only $0.45L$ ($0.9 * 0.5 * L$).

340 *Eckert*, 43 N.Y. at 508; see *supra* text accompanying note 330.

341 *Id.* at 506 (emphasis added); see *supra* text accompanying note 329.

rather than morally blameworthy or unreasonable, unless it was "foolhardy," "wanton," "rash," or "reckless."³⁴² The facts and holdings of these cases, including *Eckert*, indicate that the risk to the plaintiff rescuer is considered foolhardy, wanton, rash, or reckless only if the plaintiff put his own life at serious risk merely to save property rather than the life of another person or if there was no real or fair chance of saving the life of the person whom the plaintiff was attempting to rescue.³⁴³ In those circumstances, the plaintiff is failing to show proper respect for his own life by throwing it away for no good reason. However, if there is a fair chance of saving another's life, one's voluntary attempt to save the other's life, even at a great risk to oneself that exceeds the chance of saving the other, is deemed heroic and morally praiseworthy, both by ordinary persons and by the law.

The rights-based nature of the reasonableness test that is applied in emergency situations like *Eckert* is further demonstrated by considering two variations on the *Eckert* situation that are judged to be very different from the actual *Eckert* situation by ordinary people and the law, but are difficult (perhaps impossible) to distinguish from *Eckert* under the aggregate-risk-utility test and its underlying impartiality-of-interest assumption. In the first variation, rather than a person putting his own life at significant risk in an attempt to save the life of another (as in *Eckert*), a person puts another (innocent) person's life at significant risk in an attempt to save his own life and/or the life of one or more third persons. For example, a person pushes another innocent, non-threatening person in front of a train to save himself and several of his friends from an imminent peril, or pulls another innocent person in front of himself or jumps behind her so that she will serve as a shield against a third person intent on shooting him but not her, or maims or kills a fellow occupant of a life boat and uses her body parts for food for

342 See, e.g., *In re Lee Transit Corp.*, 37 F.2d 67, 69 (2d Cir. 1930) (L. Hand, J.) ("foolhardy") (discussed at *supra* text accompanying notes 44-48); *Rossman v. LaGrega*, 270 N.E.2d 313, 315 (N.Y. 1971) ("foolhardy"); *Wagner v. Int'l Ry. Co.*, 133 N.E. 437, 438 (N.Y. 1921) (Cardozo, J.) ("wanton" or "foolhardy"); *Baker v. T.E. Hopkins & Son, Ltd.*, [1959] 3 All E.R. 225, 233-34, 237-38, 244 (C.A.) ("wanton," "foolhardy," "recklessly"); *Furka v. Great Lakes Dredge & Dock Co.*, 755 F.2d 1085, 1088-89 (4th Cir. 1985) ("wanton," "reckless," "foolhardy," "rashness"), *cert. denied*, 474 U.S. 846 (1985); *Bridges v. Bentley*, 769 P.2d 635, 637-40 (Kan. 1989) ("rash," "wanton," "reckless"); *Fleming*, *supra* note 2, at 172 ("utterly foolhardy").

343 See, e.g., *Baker*, [1959] 3 All E.R. at 237 (Ormerod, L.J.) ("It may be that circumstances can arise of attempted rescue where the risk to the rescuer is so great and the chance of rescue so small that it could not be expected that a rescue would be attempted. That, however, is not this case.").

himself and the other occupants of the life boat. In each of these situations, the described conduct, despite its apparent or arguable net benefit under the aggregate-risk-utility test, is deemed unreasonable not only by ordinary persons, but also by the courts under both tort law and criminal law, since the conduct treats the innocent victim as a mere (sacrificial) means for promoting others' interests rather than as an autonomous "end in herself."³⁴⁴ On the other hand, if a person voluntarily decides to put herself at significant risk to save another's life, as in *Eckert*, such conduct does not constitute a morally improper, disrespectful sacrifice of the other's person or autonomy, but rather a beneficent, self-sacrificing attempt to preserve the other's person and autonomy, which is morally meritorious as long as there is a fair chance of a successful rescue.

In the second variation, a person in a situation like *Eckert* fails to attempt to rescue the helpless person whose life is in danger. Such situations of failure to aid a person whom one did not put at risk are called "nonfeasance" situations, to distinguish them from the more common "misfeasance" situations in which one created or aggravated the risky or perilous situation of the other. Although the *Eckert* court stated that "the deceased ... owed a duty of important obligation to this child to rescue it from its extreme peril, if he could do so without incurring great danger to himself," there is no such general legal duty to aid a person whom you did not put at risk. In civil law countries, there is only a duty of "easy rescue," which requires a person to attempt to rescue or aid another in an emergency situation involving serious peril to the other if and only if the rescue attempt would not involve a significant risk or burden to the rescuer.³⁴⁵ In common law countries, there is not even a duty of easy rescue, no matter how great the expected utility nor how slight the risk of the proposed rescue attempt, as the Restatement recognizes in rejecting the aggregate-risk-utility test in this context:

Misfeasance and non-feasance. An act is negligent if the risk involved

344 See *United States v. Holmes*, 26 F. Cas. 360 (C.C. Pa. 1842); *The Queen v. Dudley & Stephens*, 14 Q.B.D. 273 (1884); Restatement (Second) of Torts §§ 73 cmt. b, 74, 197, 198 (1965); Wright, *supra* note 4, at 1861-62, 1868-69 & n.55; cf. *Laidlaw v. Sage*, 158 N.Y. 73 (1899). But see *Cordas v. Peerless Transp. Co.* 27 N.Y.S.2d 198 (N.Y.C. 1941) (cab driver confronted with emergency situation that "took his reason prisoner," causing him to jump from his moving cab when a passenger pointed a gun at his head, was not liable in negligence for resulting injuries to pedestrians struck by out-of-control cab).

345 See *The Good Samaritan and the Law* (James M. Ratcliffe ed., 1966); Jay Silver, *The Duty to Rescue: A Reexamination and Proposal*, 26 Wm. & Mary L. Rev. 423 (1985).

in it outweighs its utility. On the other hand, it is not enough to create a duty to take positive action for the protection of another that the burden of giving the protection is out of all proportion small as compared to the other's need thereof. (See § 314, Comment *c*.) Some relationship between the parties or some precedent action is necessary to create such a duty.³⁴⁶

Comment *c* to section 314 elaborates: "The [no duty rule] is applicable irrespective of the gravity of the danger to which the other is subjected and the insignificance of the trouble, effort, or expense of giving him aid or protection."³⁴⁷

Posner has made several attempts to reconcile the lack of a general duty to rescue with the aggregate-risk-utility test, which apparently would require burdensome as well as non-burdensome rescue attempts as long as the expected utility of the rescue attempt is greater than the burden on the rescuer. Posner argues that treating the defendant's creation of the risky situation as a precondition to a duty of care is economically justified to avoid "practical difficulties in limiting good Samaritan liability to those who really could have prevented the injury at reasonable cost."³⁴⁸ However, the same practical difficulties exist in misfeasance situations, in which there often are multiple persons who contributed to the risky situation that resulted in the plaintiff's injury. Only a few of those persons — the ones who allegedly behaved tortiously — are deemed potentially liable, and if more than one tortiously caused the injury, the multiple tortfeasors are all held liable under joint and several (or proportionate several) liability. Although in most cases there is only one or a few tortfeasors, in some cases there are many, and all are held liable. Similarly, in nonfeasance situations, only those (usually one or few) persons who "could have prevented the injury at reasonable cost" would be deemed liable under the aggregate-risk-utility test, and if there were more than one such person, they all could be held liable.

Posner also argues that "good Samaritan liability ... would make it more costly to be in a situation where one might be called upon to attempt a rescue, and the added cost would presumably reduce the number of potential rescuers — the strong swimmer would avoid the crowded beach."³⁴⁹ The argument is that imposing a duty to rescue would actually reduce rescues by leading people to avoid situations where they might have

346 Restatement (Second) of Torts § 291 cmt. f (1965).

347 *Id.* § 314 cmt. c.

348 Posner, *Economic Analysis*, *supra* note 23, § 6.9, at 207-08.

349 *Id.* at 208; *see* Landes & Posner, *supra* note 4, at 143-46.

to rescue someone. This argument does not explain the lack of even a duty of easy rescue in common law countries — an intermediate position, adopted in civil law countries, that Posner ignores. If the duty to rescue does not require the potential rescuer to take on any significant risk or burden, there is no reason for persons to avoid potential rescue situations. The argument also fails with respect to a duty of non-easy, burdensome rescue. Persons who would avoid certain activities to avoid potential liability for failing to attempt a rescue are presumably the same persons who would not attempt a rescue if there were not such potential liability, so the no-liability rule would not increase potential rescuers or rescues. Moreover, the notion that people would avoid activities that might give rise to such potential liability is implausible, for two reasons. First, such emergency rescue situations arise very infrequently, so it would be economically irrational for a person to forego all the benefits she obtains from some activity, such as swimming (Posner's example), on the slight chance that once or twice in her lifetime she might be in a situation where she would be subject to a legal duty to make a reasonable attempt to rescue someone. Second, such emergency rescue situations can arise, with about the same frequency, almost anywhere. Emergency rescue situations include auto accidents on streets and highways, incapacitating injuries to children or others in playgrounds and neighborhoods, fires in buildings, and so forth. To avoid possible liability for failing to rescue someone, one would have to avoid all activity and seal oneself up in one's house with the curtains closed. This, again, would be economically (and otherwise) irrational.³⁵⁰

In sum, the lack of a general legal duty to undertake a burdensome rescue attempt cannot be reconciled with the aggregate-risk-utility test. On the other hand, it is readily explained under the justice theory, which insists that no person can be used solely as a means for the benefit of others. Thus, while persons can be held liable for adversely affecting others' persons or property through conduct that fails to respect those others' right to equal freedom ("mifeasance"), it would be contrary to the same basic right to

350 A similarly implausible argument focuses on the incentives of people who might need rescue: "[I]f the victim is fully compensated, too many persons who cannot swim will be induced to board ships." William M. Landes & Richard A. Posner, *Causation in Tort Law: An Economic Approach*, 12 J. Legal Stud. 109, 121 n.28 (1983). Potential rescuees are highly unlikely to engage in risky situations in the hope of being in a life-threatening emergency situation from which a person fails to rescue them, so that they (or, more likely, their survivors) can merely recover (always less than full) compensation for the losses they suffered due to the failure to rescue — losses that would not have been suffered had they simply avoided the risky situation.

equal freedom to require them to sacrifice their own interests to promote the greater good of others whom they have not put at risk ("nonfeasance").³⁵¹ Although one has a moral obligation to promote others' human fulfillment as well as one's own, that obligation is only a "wide" or "broad" ethical duty, rather than a "narrow" or "strict" legal duty, because it can only be specified as an indeterminate duty that varies depending on each would-be benefactor's own resources and needs. As Kant stated:

How far [the duty] should extend depends, in large part, on what each person's true needs are in view of his sensibilities, and it must be left to each to decide this for himself. For a maxim of promoting others' happiness at the sacrifice of one's own happiness, one's true needs, would conflict with itself if it were made a universal law. Hence this duty is only a *wide* one; the duty has in it a latitude for doing more or less, and no specific limits can be assigned to what should be done.³⁵²

However, the principles of justice would support a legal duty of easy, non-burdensome rescue, which is critical for the interests and freedom of those needing rescue, if such a duty could be determinately specified and practicably enforced without significantly interfering with the potential rescuer's equal freedom. To avoid the possibility of such significant interference, the "easy rescue" determination should be made from the subjective perspective of the potential rescuer and be subject to proof through "clear and convincing evidence" rather than the usual "preponderance of the evidence" standard. In addition, since the defendant who fails to rescue is merely being charged with nonfeasance (failure to benefit someone else) rather than misfeasance (affirmatively putting someone else at risk), the imposition of extensive damages that might bankrupt the defendant seems inappropriate. Only minor criminal penalties or significantly restricted tort damages should be made available for breach of the duty of easy rescue.³⁵³

351 See Wright, *supra* note 6, at 271-74.

352 Immanuel Kant, *The Metaphysics of Morals* *393 (Mary J. Gregor transl., 1991) (1997); see *id.* at *390, *452-54.

353 See, e.g., *Farwell v. Keaton*, 240 N.W.2d 217 (Mich. 1976) (\$15,000 in damages awarded for failure to come to aid of youthful social companion, who died).

III. JUDGE RICHARD POSNER

A. Posner, Easterbrook, and the Seventh Circuit

Posner's appointment to the U.S. Court of Appeals for the Seventh Circuit became effective December 14, 1981.³⁵⁴ As previously mentioned,³⁵⁵ in the fifty-five years since *Carroll Towing* was decided in 1947 through July 2002, it was cited in only twenty-five Seventh Circuit cases. In two of these cases, it was cited in two different opinions. In two additional cases, there was a reference to the "Hand formula" without any citation to *Carroll Towing*. All of these twenty-nine references, to *Carroll Towing* and/or the "Hand formula," occurred after Posner joined the court, and all but six appeared in opinions by Posner or Frank Easterbrook, a former colleague of Posner's at the University of Chicago and a like-minded efficiency theorist, who joined Posner on the Seventh Circuit on April 4, 1985.³⁵⁶

None of the six opinions by judges other than Posner or Easterbrook involved any attempt to apply the Hand formula; only one of them involved tort liability for negligence. In the earliest case, Judge Swygert vigorously dissented from Posner's articulation of a mathematical balancing formula, which Posner analogized to the Hand formula,³⁵⁷ as the proper test for granting a preliminary injunction.³⁵⁸ In a subsequent preliminary injunction

354 See 656 F.2d xvii (1982).

355 See *supra* text accompanying note 31.

356 See 752 F.2d xix (1985).

357 *Am. Hosp. Supply v. Hosp. Prods. Ltd.*, 780 F.2d 589, 593 (7th Cir. 1986) (Posner, J., joined by Pell, J.)

358 *Id.* at 602, 608-10 (Swygert, J., dissenting). Swygert stated, "In recent years the *Carroll Towing* opinion has undergone a renewed popularity in this circuit. *Llaguno v. Mingey*, 763 F.2d 1560, 1564 (7th Cir. 1985) [Posner, J.]; *United States Fidelity & Guaranty v. Jadranska Slobodna Plovidba*, 683 F.2d 1022, 1026 (7th Cir. 1982) [Posner, J.]; *Evra Corp v. Swiss Bank Corp.*, 673 F.2d 951, 958 (7th Cir. 1982) [Posner, J.]. My quarrel, however, is not with *Carroll Towing* but rather with the majority's attempt today to create its equitable analogue. A quantitative approach may be an appropriate and useful heuristic device in determining negligence in tort cases, but it has limited value in determining whether a preliminary injunction should issue."

Id. at 609. Swygert added, in a comment that could apply equally to the Hand formula for negligence, "Ironically, the majority never attempts to assign a numerical value to the variables in its own formula. We are never told how to measure [them]. I believe, and the majority appears to concede, that a numerical value could never be assigned to these variables." *Id.*

case, Judge Flaum's opinion for the court emphasized that the traditional equitable balancing of various factors continued to be the rule, rather than any "rigid formulaic" quantitative approach.³⁵⁹ Judge Flaum also cited the Hand formula in his opinions in two *en banc* Title VII sexual harassment cases to support his argument for a flexible, cost-sensitive assessment of whether employers had behaved reasonably in dealing with employees' complaints of sexual harassment by other employees.³⁶⁰ In a concurring and dissenting opinion in a trademark infringement case, in which the issue was the proper measure of damages, Judge Cudahy argued (erroneously) that "damages equal to 'L' from the Hand formula ... are compensatory damages, and 'optimal deterrence' is achieved when damages are so calculated."³⁶¹

In the only case involving tort liability for negligence, the issue was the proper definition of "reasonable foreseeability" of risk, rather than the definition of reasonable (non-negligent) conduct, under the Federal Employer's Liability Act ("FELA").³⁶² In his opinion for the court, Judge Harlington Wood, Jr. noted that "[m]ost of the other circuits equate foreseeability with notice [of some unsafe condition], either actual or constructive" and that the Seventh Circuit had "declined to infer negligence when a plaintiff fails to produce any evidence suggesting the employer played even the slightest role in bringing about the injury." He then appended to a list of illustrative Seventh Circuit cases a "see also" citation to an Easterbrook opinion which Wood interpreted as stating that "under Learned Hand's formula for negligence, an injury is not 'foreseeable' if the costs of precautions prohibitively exceed the expected costs of a likely accident."³⁶³

Occasionally, Posner's and Easterbrook's fellow judges have commented on the tendency of the two ex-professors (especially Posner) to disregard or misstate accepted doctrines and precedents and to engage in speculative

359 *Lawson Prods., Inc. v. Avnet, Inc.*, 782 F.2d 1429, 1435 (7th Cir. 1986) (Flaum, J.); *see id.* at 1432-36.

360 *See EEOC v. Ind. Bell Tel. Co.*, 256 F.3d 516, 531, 535-36 (7th Cir. 2001) (Flaum, J., joined by Manion and Kanne, JJ., concurring and dissenting); *Jansen v. Packaging Corp. of Am.*, 123 F.3d 490, 495, 502 (7th Cir. 1997) (Flaum, J., joined by Cummings, Bauer, Cudahy and Evans, JJ., concurring).

361 *Sands, Taylor & Wood v. Quaker Oats Co.*, 34 F.3d 1340, 1354, 1355 (7th Cir. 1995) (Cudahy, J., concurring and dissenting). *L* in the Hand formula represents *ex ante* expected harm rather than *ex post* actual harm, and efficient deterrence requires damages equal to a punitive multiple of actual harm. *See supra* note 139.

362 45 U.S.C. §§ 51-60 (2001).

363 *Williams v. Nat'l R.R. Passenger Corp.*, 161 F.3d 1059, 1062 (7th Cir. 1998) (citing *Reardon v. Peoria & Pekin Union Ry. Co.*, 26 F.2d 52, 53-54 (7th Cir. 1994)). *Reardon* is discussed at *infra* text accompanying notes 386-88.

assumptions and reasoning.³⁶⁴ In his opinion for the court in *United States v. McKinney*,³⁶⁵ Judge Flaum responded to a sharply worded "concurrence" by Posner, in which Posner claimed that the Seventh Circuit's standard for reviewing probable cause determinations for issuance of search warrants was at odds with a "steady trend."³⁶⁶ Flaum stated, "We respectfully suggest, instead, that [the supposed trend] is primarily an initiative of two very learned and, in this instance, overly innovative, jurists displeased with the state of the law. See *United States v. Malin*, 908 F.2d 163, 169-70 (Easterbrook, J., joined by Posner, J., concurring)."³⁶⁷ In *Llaguno v. Mingey*,³⁶⁸ Posner's opinion gutted the probable cause requirement for warrantless searches by employing a mathematical risk-utility test that merged the probable-cause requirement with the exigent-circumstances requirement.³⁶⁹ A majority of the judges disagreed with his merging of these two requirements. In his dissenting and concurring opinion, which was joined by Chief Judge Cummings and Judges Cudahy and Flaum, Judge Harlington Wood, Jr., stated,

The essence of Judge Posner's opinion, as I read it, is simply that when you are short on probable cause you can make up that shortage by adding exigent circumstances. I cannot accept that dangerous, unnecessary, and indefinable blending of two separate and useful traditional concepts in order to justify a warrantless search of a private home at night. The bad factual circumstances in this case are leading us to bad law for future cases.

To build the issue into even a "close line" jury question between reasonable and unreasonable police behavior the opinion indulges in one obvious speculation after another with even a little help from

364 For criticism of Posner's attempts to read economic-efficiency goals into state statutes, see Paula M. Taffe, *Imputing the Wealth Maximization Principle to State Legislators*, 63 Chi.-Kent L. Rev. 311 (1987), which reports:

Judge Posner imputes to the legislature efficiency concerns that are not supported by the language of the statute, the available legislative history or, in one case, statements of the state supreme court. The article concludes that the use of economic analysis in statutory interpretation involves unacceptable speculation and, more importantly, is violative of the judicial role and potentially violative of federalism concerns.

Id. at 312.

365 919 F.2d 405 (7th Cir. 1990).

366 *Id.* at 418, 420.

367 *Id.* at 410-11 & n.1; see *id.* at 423, 424-25 (Will, J., concurring) (also disagreeing with Posner's interpretation of the precedents).

368 763 F.2d 1560 (7th Cir. 1985), *cert. denied*, 478 U.S. 1044 (1986).

369 763 F.2d at 1564-67.

Chekhov. If this court is to indulge in that kind of speculation as a basis for an opinion we are setting a bad precedent for the police whose exigent circumstances imaginations to avoid magistrates will now be given free reign; and juries will be invited to do the same when it is their turn.

If, as the opinion holds, exigencies can substitute for probable cause, we are in effect sanctioning warrantless nighttime home entries for which no warrant would have been issued if one had been sought from a judicial officer. This is clearly an anomalous and untoward result. ... This is why the majority needs to invent this new blended warrantless search concept.³⁷⁰

Posner referred to *Carroll Towing* and/or the "Hand formula" in fifteen cases. The six that involved tort liability for negligence are separately discussed in the subsequent sections of this part. In the other nine cases, the references to *Carroll Towing* and/or the "Hand formula" occurred in *dicta* in cases involving non-tort issues.³⁷¹ Easterbrook referred to *Carroll*

370 *Id.* at 1578-79. Judge Coffey, who provided the swing vote, stated that he concurred with Posner's conclusion that the issues of probable cause and exigent circumstances were proper jury questions, but not with Posner's reasoning. *Id.* at 1570 & n.1. He engaged in a traditional distinct analysis of the two issues, *id.* at 1572-74. Posner's opinion in *Llaguno* has also been criticized by Barbara Ann White, who is generally a proponent of risk-utility analysis. She notes that the precedents cited by Posner do not support his decision "to abandon traditional fourth amendment jurisprudence analysis, which requires a showing of probable cause independent of any question of exigent circumstances," and that, by replacing the traditional requirements with his cost-benefit balancing test, "in fact Judge Posner is merely substituting his own value choices for legal precedence." White, *supra* note 22, at 118-19 & n.228.

371 *See* *Thomas v. General Motors Acceptance Corp.*, 288 F.3d 305, 308 (7th Cir. 2002) (dismissal of a claim under the Employee Retirement Income Security Act because of egregious falsehoods in the claimant's application to proceed *in forma pauperis*); *Vande Zande v. Wis. Dep't of Admin.*, 44 F.3d 538, 542 (7th Cir. 1995) (reasonableness of employer's accommodation of disability as required by the Americans with Disabilities Act); *Villanova v. Abrams*, 972 F.2d 792, 796 (7th Cir. 1992) (standard for assessing probable cause for civil commitment in action under 42 U.S.C. § 1983); *United States v. McKinney*, 919 F.2d 405, 418, 419-20 (7th Cir. 1990) (concurring opinion) (standard for appellate review of probable cause determinations for issuance of search warrants) (*see supra* text accompanying notes 365-67); *Wright v. United States*, 809 F.2d 425, 427 (7th Cir. 1987) (penalty for willful failure to pay taxes); *Am. Hosp. Supply Corp. v. Hospital Prods. Ltd.*, 780 F.2d 589, 593 (7th Cir. 1986) (standard for granting preliminary injunctions); *Duckworth v. Franzen*, 780 F.2d 645, 652 (7th Cir. 1985) (recklessness standard for cruel-and-unusual-punishment claim under 42 U.S.C.

Towing and/or the "Hand formula" in eight cases. Three of these references occurred in *dicta* in non-tort cases.³⁷² The references in the five tort cases also generally occurred in *dicta*. In no case did Easterbrook actually apply the Hand formula to the facts in the case.

The Easterbrook opinion that is most often cited (by Posner and Easterbrook) as support for the Hand formula definition of negligence is his opinion for the court in *Bammerlin v. Navistar International Transportation Corp.*³⁷³ However, Easterbrook did not attempt to apply the Hand formula in *Bammerlin*, and his only reference to it occurred in *dicta*. The plaintiff, Bammerlin, ended up on the ground with serious injuries when the left front of the twenty-ton tractor-trailer he was driving struck the right rear corner of another rig and the resulting forces caused the cab in which he was riding to disintegrate. He alleged that he had been wearing a seatbelt but that, due to defective design of the seatbelt assembly by the defendant manufacturer of the tractor, the seatbelt had failed and he had been thrown from the cab and injured when he hit the ground. The jury in the federal district court

§ 1983); *Llaguno v. Mingey*, 763 F.2d 1560, 1564 (7th Cir. 1985) (standard for warrantless searches) (*see supra* text accompanying notes 368-70); *Evra Corp. v. Swiss Bank Corp.*, 673 F.2d 951, 958 (7th Cir. 1982) (foreseeable consequences limitation on contractual liability). In his *dicta* in *Evra*, Posner erroneously stated that the same foreseeable-consequences limitation that applies in contract law also applies in tort law and that one cannot recover in tort law for damages that could have been prevented by wearing one's seatbelt. *Evra Corp.*, 673 F.2d at 958. In the great majority of jurisdictions in the United States, the failure to wear a seatbelt cannot be used to reduce a plaintiff's recovery or, at most, can be used to reduce the plaintiff's recovery by only a small maximum percentage. *See, e.g.*, 1989 Ill. Rev. Stat. ch. 95-1/2, ¶ 12-603.1(c) (1990), *recodified as* 1996 Ill. Comp. Stat. ch. 625, 5/12-603.1(c) (1997) ("Failure to wear a seat safety belt in violation of this Section shall not be considered evidence of negligence, shall not limit the liability of an insurer, and shall not diminish any recovery for damages arising out of the ownership, maintenance, or operation of a motor vehicle."); *Swajian v. General Motors Corp.*, 559 A.2d 1041 (R.I. 1989); Restatement (Third) of Torts: Products Liability § 16 cmt. f, reporters' notes at 254 (1998) (surveying the relevant state statutes).

372 *E.E.O.C. v. Indiana Bell Tel. Co.*, 256 F.3d 516, 536 (7th Cir. 2001) (employer's liability under Title VII for employee's sexual harassment of fellow employee); *Archie v. City of Racine*, 847 F.2d 1211, 1219 (7th Cir. 1988) (recklessness standard for claim for deprivation of life without due process of law under 42 U.S.C. § 1983); *Gen'l Foods Corp. v. Valley Lea Dairies, Inc.*, 771 F.2d 1093, 1101, 1103 (7th Cir. 1985) (dissenting opinion) (incurred risk defense in action for breach of warranty in commercial transaction).

373 30 F.3d 898 (7th Cir. 1994); *see, e.g., supra* note 25; *infra* notes 397, 479; *infra* text accompanying notes 384, 493.

found the manufacturer liable. Easterbrook, in an opinion joined by Posner and Judge Rovner, reversed and remanded for a new trial.³⁷⁴ The reversal was based on the trial judge's erroneously leaving to the jury the proper interpretation of possibly applicable federal safety standards.³⁷⁵ However, Easterbrook held that Bammerlin had introduced sufficient evidence from which the jury could reasonably conclude, independently of the federal safety standards, that the manufacturer's attaching the seatbelt anchor to the engine housing rather than to the floor of the cab constituted a defective design under Indiana product liability law. Without making any reference to the costs involved in adopting either method, Easterbrook stated that whether this design choice was negligent depended on which method posed the greatest risk of failure, considering all the different types of foreseeable crashes, and that the best evidence on this issue would be a statistical analysis of relevant seatbelt failures with the two different types of assembly. Although no such evidence was provided by either party, he held that the issue was properly left to the jury's intuition: "because neither side supplied data, the jurors were left to rely on intuition, and we agree with the district court that reasonable jurors could conclude that the placement of the anchorage was defective."³⁷⁶

Easterbrook's reference to the Hand formula occurred when he was discussing the manufacturer's contention that the failure of the anchorage could not have rendered the assembly defective since (i) the failure had merely loosened the belt, (ii) the plaintiff would not have been injured, despite the loosened belt, if the belt buckle had not come unlatched (allegedly as a result of being hit by a flying object), and (iii) the buckle itself was not defective.³⁷⁷ Rather than responding, e.g., that the loosening of the belt (may have) increased the risk of the belt buckle's being hit or opening if it were hit, Easterbrook ran through a non-responsive hypothetical application of the Hand formula to hypothetical quantified risks and costs to demonstrate "the fact that the probability of a particular failure is low is no defense if the costs of protecting against it are even lower."³⁷⁸ Noting that "[t]his is nothing but an application of Learned Hand's formula for negligence" and ignoring his earlier acknowledgment of the Indiana courts' "disagreement ... about the

374 30 F.3d at 899-900, 902.

375 *Id.* at 900-01.

376 *Id.* at 901.

377 *Id.* at 901-02.

378 *Id.* at 902 (citing Restatement (Third) of Torts: Products Liability § 2(b) & reporters' notes at 40-45, 123-25 (Tentative Draft No. 1, 1994)). As previously discussed, the Restatement Third adopted a limited, consumer-oriented, qualitative rather than quantitative version of risk-utility analysis for defective designs, which is consistent with the justice-based, non-balancing, prohibitive-cost test for the creation of risks

proper way to articulate the standard of products liability,"³⁷⁹ he stated that "[o]ur court has applied Judge Hand's approach in many kinds of negligence actions"³⁸⁰ and that there was "no reason to think that [Indiana] would see things otherwise" since "the definition of a product defect in Indiana depends on general principles of negligence."³⁸¹

Easterbrook was more demanding in his opinion one week later in *Pries v. Honda Motor Co.*³⁸² The plaintiff, Pries, suffered severe injuries as a result of being thrown out of her car during a roll-over accident. She alleged that the car was defectively designed because the seatbelt mechanism permitted the belt to become slack when the car rolled over. The trial court found that she had not been wearing her seatbelt and granted summary judgment for the defendant automobile manufacturer. Finding that there was substantial evidence that Pries had been wearing her seat belt, Easterbrook reversed and remanded for a new trial.³⁸³ However, he added,

Our concentration on the question whether Pries fastened her seat belt does not imply that *if* she fastened the belt, and nonetheless slipped out during an accident, the assembly must have been defectively designed. As we have emphasized here and in *Bammerlin*, Indiana requires the plaintiff to show that another design not only could have prevented the injury but also was cost-effective under general negligence principles. ... [The plaintiff's expert] testified that particular additional devices would have kept the belt tight in a rollover, but he conceded that no car in production anywhere in the world in 1988 used the combination of devices he favored. This, coupled with the absence of data about either the costs of additional precautions or the aggregate injuries avoidable by using them, raises a serious question whether failure to adopt such a precaution was negligent. ... Without the aid of an engineer or a statistician to set out the factors relevant to negligence (on which see *Bammerlin* and, e.g., *United States v.*

to participatory plaintiffs, rather than the efficiency-based, unlimited, aggregate-risk-utility test espoused by Posner and Easterbrook. *See supra* text accompanying notes 222-26.

379 30 F.3d at 901 (citations omitted).

380 *Id.* at 902 (citing *McCarty v. Pheasant Run, Inc.*, 826 F.2d 1554, 1556 (7th Cir.1987) (Posner, J.) (discussed at *infra* Section III.D.)).

381 *Id.* (citing *Miller v. Todd*, 551 N.E.2d 1139, 1141 (Ind. 1990)).

382 31 F.3d 543 (7th Cir. 1994) (decided Aug. 3, 1994). *Bammerlin* was decided July 27, 1994.

383 *Id.* at 543-45.

Carroll Towing Co., 159 F.3d 169, 173 (2d Cir. 1947)), Pries may find it difficult to prevail.³⁸⁴

Unlike his concession to intuition in *Bammerlin*, in *Pries* Easterbrook indicates that the plaintiff is unlikely to prevail without a formal Hand-formula analysis of quantified aggregate risks and precaution costs. It is true that the costs of precautions as well as the magnitude of the risk are relevant considerations under the "risk-utility" branch of defective-design analysis. However, as we have previously discussed, the relevant costs are the costs to the users and consumers of the product, rather than purely private costs to the manufacturer or general costs to the local economy, and these costs are taken into account through a justice-based, qualitative, non-balancing, prohibitive-cost test rather than through the efficiency-based, quantitative, aggregate-risk-utility test that is assumed by Easterbrook and Posner.³⁸⁵

Earlier in 1994, Easterbrook wrote the court's opinion in *Reardon v. Peoria*

384 *Id.* at 546. In *McMahon v. Bunn-O-Matic Corp.*, 150 F.3d 651 (7th Cir. 1998), Easterbrook acknowledged that ordinary consumers do not know that full-thickness third-degree burns, which char and destroy the skin and nerves, can be and have been caused by only a few seconds' contact by the very hot coffee served at drive-up establishments. *Id.* at 656 ("indeed, ordinary consumers do not know what a 'full thickness third degree burn' is"). Yet, stating that "Bunn can't deliver a medical education with each cup of coffee," *id.*, he upheld a summary judgment against an unsuspecting plaintiff suffering such an injury on the ground that it was not feasible to provide a warning:

To be useful, warnings about burns could not stop with abstract information about the relation among a liquid's temperature and volume (which jointly determine not only the number of calories available to impart to the skin but also the maximum rate of delivery), contact time (which determines how many of the available calories are actually delivered), and the severity of burns. It would have to address the risk of burns in real life, starting with the number of cups of coffee sold annually, the number of these that spill (broken down by location, such as home, restaurant, and car), and the probability that any given spill will produce a severe (as opposed to a mild or average) burn. Only after understanding these things could the consumer determine whether the superior taste of hot coffee justifies the incremental risk.

Id. If, contrary to both common sense and the law, such comprehensive and detailed information were necessary to provide an adequate warning, no manufacturer would ever be obliged to warn about any risk, since such detailed, comprehensive warnings would never be feasible. The following warning would seem to be both feasible and useful: "Extremely hot coffee. If spilled, it can/will char and completely destroy your skin and nerves in a few seconds!" For greater effect, one could add a picture of a victim's charred nether regions. See *supra* note 43.

385 See Restatement (Third) of Torts: Products Liability § 2(b) & cmts. b, f, g, h, § 3 (1998); *supra* text accompanying notes 222-26.

& *Pekin Union Railway Co.*³⁸⁶ The plaintiff, Reardon, was a locomotive engineer whose eye was put out by a pellet that was shot through the open window of the locomotive as the train was passing slowly by a public housing project. Reardon alleged that the defendant railroad, his employer, had been negligent by failing to post guards to patrol the area, to install bulletproof glass, or to provide goggles. The trial court granted a summary judgment in favor of the defendant, on the ground that a gunshot attack at the particular site was not foreseeable, since there previously had been no shots fired but only rocks thrown, less than once a year.³⁸⁷ Shifting unclearly back and forth between a foreseeable-risk analysis and a conclusory reference to the Hand-formula test of reasonable care, Easterbrook stated,

If the only question were whether the railroad had to post guards at the site or post roving patrols, the district court's approach would be appropriate. The burden of taking such precautions would far exceed the losses anticipated at this site. To say that an injury is not foreseeable is simply to say the probability of loss is low — to apply Learned Hand's famous formula for negligence, $B < PL$ Because the FELA does not hold the employer strictly liable, a conclusion that the burden of precaution would substantially exceed the loss such precautions could prevent forecloses the possibility of recovery. The FELA holds railroads to the prudent-person standard of care, the cornerstone of negligence law. ...

Hazards from projectiles are not confined to one stretch of track. Data compiled by the American Association of Railroads ... show that shooting at trains is depressingly common. ... Hazards that accompany the train should be dealt with by precautions that accompany the train — not by guards [at the site where the injury occurred] but by capital expenditures such as bulletproof glass. We need not decide, however, whether ... a railroad should have installed windows that resist penetration — for it is undisputed that federal regulations require, and the locomotive involved in this case had, this equipment. Even the best safety precautions are of little value if employees defeat them, and this crew left the windows open.³⁸⁸

The Hand formula was similarly mentioned, but not applied, in Easterbrook's opinion for the court in *I&M Rail Link, LLC v. Northstar*

386 26 F.3d 52 (7th Cir. 1994) (decided June 10, 1994); *see supra* note 382.

387 26 F.3d at 53.

388 *Id.* at 53-54 (citations omitted).

*Navigation, Inc.*³⁸⁹ The defendant tug operator counterclaimed against the plaintiff railroad for damage to the tug that occurred when the tug, with barges in tow, struck and damaged the railroad's Sabula Bridge. The trial judge granted a summary judgment on the counterclaim in favor of the railroad, based on an admiralty law presumption of fault by a vessel when it hits a stationary object. The tug operator sought to overcome this presumption by introducing evidence of a Coast Guard finding and order, almost two years before this accident, that the Sabula Bridge, which was over one-hundred-years old and had repeatedly been struck by vessels in recent years, was an unreasonable obstruction to modern navigation on the river and had to be renovated. There was insufficient space between the bridge's supports for the larger barge assemblies now common on the river to pass through safely and to navigate the turn at that point in the river without perfectly lining up the tug and barges and keeping them perfectly lined up as they passed under the bridge with minimal clearance on either side. The trial court had found that the only significance of this finding and order was to enable a sharing by the federal government of the cost of the bridge renovation. Easterbrook held that the finding and order did not have such limited significance, reversed the summary judgment, and remanded the counterclaim for trial under admiralty law's comparative responsibility regime.³⁹⁰

Citing *Carroll Towing's* negligence formula, Easterbrook stated, "If the Coast Guard may find the Sabula Bridge an unreasonable obstruction based on the cost and accident data, then so may the trier of fact in admiralty."³⁹¹ However, the Coast Guard's finding apparently was based solely on the accident data, without any consideration of the costs of renovation.³⁹² Easterbrook himself, after noting "[t]he Sabula Bridge is the third-most-frequently struck on the Mississippi: it was hit at least 204 times from 1972 through 1996; ... Other bridges are hit rarely if ever," concluded, without any reference to renovation costs, that "[c]alling the most-frequently-struck bridges unreasonable hazards to navigation makes a good deal of sense."³⁹³ This is not an application of the Hand formula's aggregate-risk-utility test, but rather, at most, an implicit application of the non-balancing, prohibitive-cost test for socially important activities.³⁹⁴

389 198 F.3d 1012 (7th Cir. 2000).

390 *Id.* at 1013-16.

391 *Id.* at 1016.

392 *See id.* at 1013-14, 1015-16.

393 *Id.* at 1015-16.

394 *See supra* Section II.E.

In the most recent case, *In re Bridgestone/Firestone, Inc.*,³⁹⁵ Easterbrook's opinion for the court reversed the district court's certification of nationwide classes for persons seeking compensation for the risk of failure of Ford Explorers or Firestone tires.³⁹⁶ In *dicta* in a footnote, Easterbrook asserted that, if the expected cost of injuries due to a defective product is \$500,000, "a manufacturer should not spend more than \$500,000 to make the widgets safer."³⁹⁷ It is fortunate for Easterbrook and those who might otherwise have been his clients that he is an academic turned judge rather than a practicing attorney, since in actual practice this sort of attempted justification for creation of a significant risk to others would likely result in an award of punitive as well as compensatory damages, in both the United States and England.³⁹⁸

B. *United States Fidelity & Guaranty Co. v. Jadranska Slobodna Plovidba*

Posner first attempted to employ the Hand formula to resolve the negligence issue in his May 1982 opinion for the court in *United States Fidelity & Guaranty Co. v. Jadranska Slobodna Plovidba*.³⁹⁹ The plaintiff's decedent, Patrick Huck, a longshoreman, fell to his death through a thirty-foot-wide open hatch in a pitch-dark closed hold in the defendant's ship. The 'tween deck hatches had been opened when the hold was closed by the ship's crew after the longshoremen had completed their work in the hold. Huck, unobserved, had reentered the closed hold later that day through an unlocked and perhaps open door from the adjacent weather deck on which the longshoremen were then working. No one knew why he had reentered the hold, but it was conjectured that he was planning to steal some liquor that was stored in the hold. In a special verdict, the jury found that the defendant had not been negligent.⁴⁰⁰

The plaintiff had sued the shipowner under the Longshoremen's and Harbor Workers' Compensation Act, which had been amended in 1972 to substitute negligence for unseaworthiness as the standard of liability in actions by longshoremen against shipowners. Stating that neither the statute nor subsequent decisions by the Supreme Court had provided any definition of negligence,⁴⁰¹ Posner approved "the negligence formula" previously proposed by the First Circuit, "which requires 'balancing the

395 288 F.3d 1012 (7th Cir. 2002).

396 *Id.* at 1014-15, 1021.

397 *Id.* at 1017 n.1 (citing *Carroll Towing and Bammerlin*).

398 *See supra* Section II.F.

399 683 F.2d 1022 (7th Cir. 1982).

400 *Id.* at 1023-24.

401 *Id.* at 1025.

usefulness to the ship of the dangerous condition and the burden involved in curing it against the probability and severity of the harm it poses."⁴⁰² Equating this formula with Hand's mathematical formula in *Carroll Towing*,⁴⁰³ he echoed Hand's comments in *Moisan v. Loftus*⁴⁰⁴ about the impossibility of actually performing the suggested mathematical calculation:

Though mathematical in form, the Hand formula does not yield mathematically precise results in practice; that would require that B, P, and L all be quantified, which so far as we know has never been done in an actual lawsuit. Nevertheless, the formula is a valuable aid to clear thinking about the factors that are relevant to a judgment of negligence and about the relationship among those factors.⁴⁰⁵

The first challenged jury instruction read: "A shipowner's duty to provide longshoremen with a reasonably safe place to work is confined to those areas of the vessel where longshoremen may reasonably be expected to go."⁴⁰⁶ Posner claimed:

This instruction is consistent with the Hand formula. Of course it is possible that a longshoreman will stray into a part of the ship where he has no business, but the probability (P in the Hand formula) seems too low to warrant the shipowner's taking precautions against an accident to him. If Huck had wandered into the captain's stateroom and slipped on a throw rug there, it would be unreasonable to impose liability on the shipowner even if the cost of doing without the throw rug would have been slight. Hold number 1 was not so remote from Huck's work area as the captain's stateroom would be, but all the challenged instruction did was ask the jury to decide whether it was a place where

402 *Id.* at 1025-26 (quoting *Johnson v. A/S Ivarans Rederi*, 613 F.2d 334, 348 (1st Cir. 1980)). The *Johnson* court's examples merely distinguished between hazards that "served no useful purpose" and those that were unavoidable. 613 F.2d at 348. One of the court's examples involved the issue in *Plovindba*:

While it was negligence for a vessel to leave tween deck hatch covers open and the hatch unlighted and unguarded if the hatch was not to be loaded with cargo, the existence of the very same conditions did not constitute negligence if the cargo was to be loaded into the hatch, since an open hatch is essential to the task of loading and unloading a ship. Compare *Miller v. The Sultana*, 176 F.2d 203, 206, with *Badalamenti v. United States*, 160 F.2d 422, 425-26.

Id.

403 683 F.2d at 1026.

404 See *supra* text accompanying note 111.

405 683 F.2d at 1026.

406 *Id.*

the shipowner should have expected Huck to be when the accident occurred, and this was proper.⁴⁰⁷

Posner's attempt to use the Hand formula to justify this instruction is mere *ipse dixit*. Using his own hypothetical, which assumes that it is possible that the longshoreman will go into the captain's stateroom, it cannot be stated categorically (as Posner does) that it would be unreasonable *under the Hand formula* to impose liability on the shipowner even if the cost of doing without the throw rug would have been slight. The assumed slight cost might well be less than the cost or disutility of (possibly serious) bodily injury to the longshoreman, even when the latter cost is discounted by the assumed low probability of the longshoreman's entering the stateroom and slipping on the rug. Moreover, in some circumstances the probability might be significant. The categorical no-duty rule assumed by Posner is not and cannot be supported by the Hand formula, but rather is based on the longshoreman's status as a trespasser rather than an invitee or licensee. This distinction, as we have already discussed, is obvious and significant under a theory of liability that takes into account the respective rights positions of the parties, but is difficult if not impossible to justify under the Hand formula or any other interpretation of negligence that fails to take the parties' rights into account and, instead, treats all costs and benefits as fungible regardless of their incidence.⁴⁰⁸

The plaintiff also claimed that, even if the instructions were satisfactory, the shipowner should have been found negligent as a matter of law. Posner responded to this claim as follows:

We again use the Hand formula to frame this issue. L, the loss if the accident occurred, was large. There was a 25 foot drop from the upper 'tween deck of hold number 1 to the bottom of the hold, and a fall from that height was very likely to cause serious injury or, as in this case, death. As to B, the burden of precautions, there were various ways the

407 *Id.*

408 *See supra* Section II.B. Posner employed a similar implausible empirical assumption in his attempt to use the Hand formula to justify the third challenged jury instruction, which read: "After stevedoring operations begin, the shipowner has no duty to superintend the operations of the stevedore or its employees." 683 F.2d at 1027. Posner stated, "In the terms of the Hand formula the probability of an accident, given that the stevedore rather than the shipowner is actually conducting the stevedoring operations, is too slight to warrant making the shipowner take his own backup precautions to prevent the accident." *Id.* This assumption is not only unsupported, but also, unfortunately, belied by long experience.

shipowner could have prevented the accident. He could have lit the hold, locked the hatchway leading to it from the weather deck of hold number 2, roped off the open hatch, or placed a sign at the hatchway (though the effectiveness of this last precaution may be doubted). Probably the cheapest way of avoiding the accident, however, would have been for the ship's crew not to open the hatches until all the longshoremen had left the ship. This would have meant either the crew's working after normal working hours, or, if the opening of the hatches was postponed till the following morning, delay in beginning stevedoring operations at the next port of call. We doubt that either alternative would be very costly so we judge B in this case to have been, at most, moderate, and possibly small.

If P, the probability of an accident if the precautions that would avert it were not taken, was high, then it would appear, in light of our discussion of L and B, that the shipowner was negligent in failing to take one of the precautions that we have mentioned. But probably P was low. There was no reason for a longshoreman to reenter a hold after he had completed his work there and moved on to another part of the ship. The plaintiff speculates that Huck may have left a piece of clothing in hold number 1 and gone back to retrieve it. It does not seem very likely that anyone would enter a pitch-black hold to retrieve a glove or a sock or a jacket, when he could easily ask for light. It is far more likely that Huck entered for an illicit purpose. ... Unless it is common for longshoremen to try to pilfer from darkened holds — and it was the plaintiff's burden to show that it is — the shipowner would have no reason to think it so likely that a longshoreman would be in a darkened hold as to require precautions against his falling through an open hatch.⁴⁰⁹

As others have noted, this purported application of the Hand formula is not credible.⁴¹⁰ Given the admittedly very slight burden of preventing entry into the darkened hold, which could be accomplished by merely locking and perhaps even by merely closing the entry door, and given the admittedly high probability of very serious injury if someone should enter the hold, the Hand formula would surely require locking the door if there were even the slightest chance of someone entering the hold. It might or might not be *common* for

⁴⁰⁹ 683 F.2d at 1027-28.

⁴¹⁰ See Kelley, *supra* note 2, at 756; White, *supra* note 22, at 135. White observes that Posner's discussion in *Plovindba* "gives cost-benefit analysis a bad name." *Id.* at 132.

longshoremen to attempt to pilfer goods from ships they are loading and unloading, but it is common knowledge — so common as not to require any specific proof — that such theft of goods (especially alcohol) by persons charged with handling such goods in transit frequently does occur. At the very least, it is a significant possibility.

Possibly foreseeing this objection, Posner attempted to reinforce his Hand formula argument:

Moreover, the relevant probability, so far as the Hand formula is concerned, is not the probability that a longshoreman would enter a darkened hold but the probability that he would fall into an open hatch in such a hold. The probability was small. The darkness was as effective a warning of danger as a sign would have been. Any longshoreman would know that there was a hatch on the floor and he could not rationally assume that it was closed. Only a reckless person would walk about in the hold in these circumstances, especially if he had no flashlight; Huck had none. There are reckless people as there are dishonest people; but the plaintiff did not try to prove that there are so many reckless dishonest longshoremen as to require the precautions that the defendant in this case would have had to take to avert injury to them.⁴¹¹

It may well be reckless to walk around in a pitch-black hold without a flashlight, but, contrary to Posner's assumption, the probability of such recklessness is significantly increased rather than decreased when combined with an assumption of "dishonesty": the thief, after all, wants to avoid detection. Moreover, while it is reasonable to assume that a longshoreman, especially one who had previously been working in the hold at issue, could be assumed to know there was a hatch on the floor, there is no reason to assume, as Posner does, that "he could not rationally assume that it was closed." After all, it was closed when he was working in the hold and when he left the hold after the loading and unloading had been completed. Why should he expect the hatch to be opened thereafter when the hold was closed for the upcoming voyage? Posner admitted, "We do not know whether Huck was aware of the custom of opening the hatches after the longshoremen left the hold," yet he illogically stated, "for the reasons just suggested it is not critical whether he was or not."⁴¹² He further asserted:

But probably he was. His body was found well forward of where he

⁴¹¹ 683 F.2d at 1028.

⁴¹² *Id.*

would have fallen had he walked straight into the hold. No doubt he was trying to skirt what he knew to be an open hatch. The shipowner was not required to anticipate that a longshoreman knowing of the open shaft would not be able to avoid it; this was possible — it happened — but the probability was too remote to warrant precautions beyond the implicit warning of darkness itself.⁴¹³

Once again Posner's empirical assumption is implausible. Unfortunately, persons often fall into openings of which they are aware, even when there is light, and the probability of doing so is greatly magnified when the opening, as in this case, is in a pitch-black hold.⁴¹⁴

Even if we grant Posner all of his implausible assumptions, there still remains a significant possibility that a longshoreman, although aware of the hatch being open in the pitch-black hold, might enter the hold to steal goods without a light (to avoid detection), fail to avoid the open hold, and fall to his death or serious injury. Given this significant possibility (P) and the very high magnitude of L (death or serious injury), the Hand formula would seem to require the taking of the extremely minimal burden (B) of simply locking the entry door.

Posner cited two other darkened-hold, open-hatch cases, in one of which, *Grayson v. Cordial Shipping Co.*,⁴¹⁵ the shipowner also was found not negligent and in the other of which, *Badalamenti v. United States*,⁴¹⁶ the

⁴¹³ *Id.*

⁴¹⁴ Posner further argued:

Another factor bearing on the probability of an accident is that Huck was under the general supervision of the stevedore company that employed him. Even if the defendant should have regarded Huck as no better than a sheep wandering about the ship with no rational concern for his own safety, it was entitled to regard the stevedore as his principal shepherd. The stevedore had a work rule forbidding longshoremen to be anywhere on the ship except where stevedoring operations were actually in progress. The shipowner was entitled to rely on the stevedore to enforce this rule, if not 100 percent at least enough to make it highly improbable, in light of the other circumstances that we have discussed, that one of the longshoremen would stray away from the rest and fall into a darkened hold.

Id. This bootstrapping argument confuses the preexisting legal relationships and work rules with the empirical probability of the longshoreman's straying from the workplace, for licit or illicit reasons. Under the aggregate-risk-utility test, the empirical probabilities are supposed to determine the legal obligations, a relationship that is reversed in Posner's argument.

⁴¹⁵ 496 F.2d 710 (7th Cir. 1974) (cited in *Plovdiva*, 683 F.2d at 1029).

⁴¹⁶ 160 F.2d 422 (2d Cir. 1947).

shipowner was found negligent. Posner claimed that the probability of injury was higher in *Badalamenti* than in *Plovidba* or *Grayson*.⁴¹⁷ He stated that in *Badalamenti* "[t]here was no partition between the lighted and unlighted parts of the cargo area; and the longshoreman was injured while searching for rope that the shipowner had undertaken to provide for stevedoring operations and had left in an unlighted part of the deck."⁴¹⁸ Actually, the injured longshoreman only assumed that there was a locker, containing rope and a chain-pull light, in the dark part of the deck, similar to a locker he had seen on the next higher deck. Rather than going to the dock to get the needed rope, he walked through the dark portion of the deck with his hand in front of him, reaching out for the expected light chain, for approximately 30-35 feet before falling to the deck below through an open hatch around 50 feet from where he had been working.⁴¹⁹ The Second Circuit, in an opinion by Learned Hand's cousin Augustus Hand for himself and Judges Chase and Frank, upheld the trial judge's finding that the shipowner had been negligent for not warning about or otherwise protecting the longshoremen from the open hatch in the dark portion of the deck: "It is not reasonable to suppose that stevedores would not be likely to go about the deck where they were working and not to foresee danger to them from an open hatch which was only about 50 feet away."⁴²⁰ Although *Badalamenti* was another admiralty case decided the same year as the *Carroll Towing* case and the judges in *Badalamenti* were the same as in *Carroll Towing*, except for Learned Hand being replaced by Augustus Hand (who had joined Learned Hand's opinions in *Gunnarson* and *Conway*),⁴²¹ there was no mention of any aggregate-risk-utility test in *Badalamenti*.

While the probability of a longshoreman's entering the darkened hold and falling through the open hatch was higher in *Badalamenti* than in *Plovidba*, the probability seems to have been even higher in *Grayson*, the case in which the shipowner was found not negligent, which perhaps explains Posner's failure to discuss the facts in *Grayson*. In *Grayson*, there were two identical, unmarked, open manholes only three to four feet apart in a six to seven foot wide deckhouse. The right-hand manhole led to a hold, lit by an open overhead hatch, in which the longshoremen were working. The left-hand manhole led to a pitch-black hold in which no one was working. The plaintiff longshoreman, Grayson, who had come up through the right-hand manhole to go to a washroom, upon his return to the deckhouse "[f]or reasons

417 *Plovidba*, 683 F.2d at 1029.

418 *Id.*

419 *Badalamenti*, 160 F.2d at 424-25.

420 *Id.* at 425.

421 See *supra* text accompanying notes 72, 82, 100.

unknown" went down through the left-hand manhole into the pitch-dark hold and was injured when he fell through an open hatch to the lower deck. A short time before, a union steward who had just come aboard had accidentally gone down through the left-hand manhole and descended to the deck before noticing it was pitch-black and that he was in the wrong hold.⁴²² Clearly, the probability of someone accidentally or purposely going into the darkened hold, through an open manhole that was only three or four feet away from and identical to the proper manhole, was significant, and there apparently was no good reason for leaving the left-hand manhole open. Yet the trial court concluded, and (for unexplained reasons) Grayson conceded, that the shipowner had not been negligent.⁴²³ On the seaworthiness issue, the circuit court, noting that "conflicting inferences might be drawn from the testimony," held that the trial court's finding that the shipowner "had no reason to expect that Grayson would go into the [left-hand hold]" was not clearly erroneous.⁴²⁴ The court agreed with another court's statement: "'Confining the duty of maintaining a seaworthy vessel to the reasonable scope of the longshoreman's activity is logical and correct in principle. ... [H]is presence at a location unconnected with his task is not to be anticipated.'"⁴²⁵

Contrary to Posner's assertion, it is impossible to explain the differing results in these cases using the Hand formula. The shipowner was found not negligent in *Plovidba* and *Grayson* but was found negligent in *Badalamenti*. Although the probability of injury seems to have been lowest in *Plovidba*, the magnitude of the possible injury (death or serious injury) was so high and the burden of precaution was so minimal (merely locking or perhaps even merely closing the entry door) that a finding of negligence would seem to be required using the Hand formula. The finding of no negligence in *Grayson* cannot possibly be squared with the Hand formula, given the much higher probability of injury, the high magnitude of the possible injuries, and the minimal burden of merely closing the cover on the left-hand manhole, which provided access to the dark hold with the open hatch in which no one was working and which was only three to four feet from and thus easily might be confused with the identical, unmarked right-hand manhole.

On the other hand, the differing results in the cases are easily explained by the limited duty owed by owners of property (including ships) to trespassers on their property, which in turn is based on the respective rights positions

422 *Grayson*, 496 F.2d at 712-13.

423 *Id.* at 713.

424 *Id.* at 715.

425 *Id.* at 714 (quoting *Barnes v. Rederi A/B Fredrika*, 350 F.2d 865, 866-67 (4th Cir. 1965)).

of the property owner and the trespasser. Plovidba clearly was a trespasser, most likely a deliberately wrongful trespasser. Grayson also was treated by the courts as a trespasser, perhaps innocent or perhaps wrongful, since he was in a part of the ship where he clearly did not belong. Badalamenti, on the other hand, was treated as a business invitee searching for rope the shipowner had an obligation to supply in a likely location in an area within the immediate vicinity of the longshoremen's worksite.

Posner's arguments thus far are based on a direct application of the Hand formula to the facts in *Plovidba*. He supplemented these implausible arguments with an indirect argument that relied on the contractual relationship between the shipowner and the stevedore who employed the plaintiff longshoreman:

The fact that the practice of leaving the hatches open in darkened holds was customary (or so the jury could find) and not just an idiosyncrasy of this Yugoslavian ship or shipowner has additional relevance to this case. Although custom is not a defense to a charge of negligence, *The T.J. Hooper*, 60 F.2d 737, 740 (2d Cir. 1932), it is a material consideration in evaluating the charge, especially where the victim and the alleged tortfeasor are linked, even if indirectly, in a voluntary relationship, as they were here. If a shipowner were to follow a practice that flunked the Hand formula — that in other words was not cost-justified, because the expected accident costs associated with the practice exceeded the costs of abandoning the practice and so preventing any accident from happening — then he would have to pay his stevedores higher rates, to compensate them for the additional risk to their employees, the longshoremen, whom the stevedores must compensate under 33 U.S.C. § 904, regardless of fault, for any injury the longshoremen sustain in the course of their employment. And since by hypothesis the cost to the stevedores of the additional compensation — the expected accident cost, in other words — would exceed the cost of abandoning the practice (for otherwise the practice would be cost-justified), it would pay the shipowner to abandon it. Cf. Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1961). Hence if the shipowner persists in a dangerous practice — if the whole trade persists in the practice — that is some evidence, though not conclusive, that the practice is cost-justified, and not negligent.⁴²⁶

This argument also fails. The stevedores, being statutorily liable only for

426 *Plovidba*, 683 F.2d at 1028-29.

injuries a longshoreman sustains in the course of his employment, would not be liable for injuries sustained when the longshoreman was on a "frolic or detour" away from his employment, as is assumed in this case, and thus would have no reason to seek contractual indemnification or increased compensation from the shipowner for the risk of such liability. Conversely, if (as Posner assumes) all injury costs were the responsibility of the stevedores and were passed on by contract to the shipowners, strict application of the economically interpreted aggregate-risk-utility test should result in the shipowners' (supposed) customs regarding safety practices being conclusive evidence, rather than merely some evidence, of what constitutes reasonable care. Yet, as Posner notes, this is not the law.

It may be a sign of Posner's (or his colleagues') recognition of the implausibility of using the Hand formula to explain the legally proper result in *Plovinda* that, despite his declaration that the Hand formula is the legally correct test of negligence under federal admiralty law, in the end he merely recommended rather than required its use by the federal district courts in the Seventh Circuit:

We do not want to force the district courts into a straitjacket, so we do not hold that they must use the Hand formula in all maritime negligence cases. We merely commend it to them as a useful tool — one we have found helpful in this case in evaluating the plaintiff's challenge to the jury instructions and its contention that negligence was shown as a matter of law.⁴²⁷

C. Davis v. Consolidated Rail Corp.

In *Davis v. Consolidated Rail Corp.*,⁴²⁸ the plaintiff, Davis, had portions of his legs severed by the wheels of the defendant railroad's train when, without any advance warning, such as the customary blowing of the train's horn or ringing of its bell, the train was moved while Davis was under it inspecting piggyback cars leased to the defendant by his employer. Davis was an experienced railroad worker who, for the past six years, had engaged in such inspections of leased cars while the cars were sitting in railroads' train yards. The cars that he was inspecting were near the front of a long train. He had seen the train's locomotive pull into the yard, decouple from the cars and leave them in place, and move away westward. However, unbeknownst to him, while he was engaged in his inspection, another locomotive was ordered

⁴²⁷ *Id.* at 1026.

⁴²⁸ 788 F.2d 1260 (7th Cir. 1986).

to couple to the other end of the train and to move the train a few car lengths east to unblock a switch. The other end of the train was three-quarters of a mile away to the east around a curve and thus not visible to Davis. Two members of the second locomotive's train crew were in the locomotive; the other two, one of whom was designated as the rear brakeman, were somewhere alongside the train, but not at its western end where Davis was conducting his inspection. Davis had failed to follow the legally required and customary practice of having blue metal flags placed at each end of the train to warn against moving the train while he was engaged in his inspection. The jury found that Davis, the railroad, and Davis' employer (against whom the railroad had brought a contribution action) were all negligent. The railroad appealed, claiming that it had not been negligent as a matter of law and, alternatively, that it had been assessed too high a level of comparative responsibility.⁴²⁹

Davis alleged three distinct instances of negligent conduct by the railroad. The first instance was the failure of one of the railroad's employees — who had seen Davis sitting in his van near the train as or shortly after the train pulled into the yard and, not recognizing him, had thought it was queer that he was there — to use the two-way radio in his auto to notify the second locomotive's train crew that an unknown person had been seen sitting in a van parked near the train.⁴³⁰ Posner dismissed this alleged negligence as "a rather absurd suggestion. [The railroad employee] had no reason to think that the man in the van would climb out and crawl under a railroad car."⁴³¹ This might be a plausible finding that, as a matter of law, the railroad's employee had no reason to foresee any risk to Davis. Posner, however, sought to explain this holding as an application of the Hand formula: "If P is very low, elaborate precautions are unlikely to be required even if L is large; and here the necessary precautions would have been elaborate."⁴³² This reference to the Hand formula is superfluous and implausible. The precaution of using the two-way radio to notify the second locomotive's crew (or the yard dispatcher) of an unknown person sitting in a van by the train would hardly have been "elaborate" or burdensome. If there had been any foreseeable possibility, no matter how slight, that Davis might crawl under or between the train cars, the great magnitude of the potential injury (L) surely would have required taking this minimal precaution to protect him, since he was a business invitee on the railroad's property.

⁴²⁹ *Id.* at 1262.

⁴³⁰ *Id.* at 1262, 1263.

⁴³¹ *Id.* at 1263.

⁴³² *Id.* at 1264 (citing *Plovindba*).

The second instance of alleged negligence, which Posner described as "even more fantastic," was the failure of one of the second locomotive's crew-members to walk the train's entire length and look under each car prior to moving the train.⁴³³ Posner stated:

The probability that someone was under a car was too slight, as it reasonably would have appeared to the crew, to warrant the considerable delay in moving the train that would have been caused by having a crew member walk its entire length [checking under each car] and then walk back, a total distance of a mile and a half.⁴³⁴

This holding seems correct, for reasons independent of the Hand formula. Even if it were foreseeable that someone might be under one of the train's cars, the probability was remote, and even under the justice-based theory of liability, a person is not required to take burdensome precautions against insignificant foreseeable risks.⁴³⁵ Moreover, the proposed precaution would do little to reduce the remote risk: during the extended time required to check under every car of the long train, a person could have climbed under or between previously checked cars.⁴³⁶ On the other hand, if there were a significant foreseeable risk that an invitee might be under or between the cars, and no less burdensome and equally effective precaution were available, the railroad might well be required to undertake the car-by-car inspection, even if the burden of doing so might be thought, quantitatively or otherwise, to be greater than the foreseeable risk.⁴³⁷

The third instance of negligence alleged by Davis was the failure of the second locomotive's train crew to blow the train's horn or ring its bell prior to moving the train. Posner held that the jury could reasonably find that the failure to take this minimal precaution had been negligent, given the foreseeable, albeit perhaps not significant, risk that some railroad employee or business invitee such as Davis might be working on, under, or near the

433 *Id.*

434 *Id.*

435 *See supra* Section II.F.

436 Compare *Pokora v. Wabash Railway Co.*, 292 U.S. 98 (1934), in which Justice Cardozo's opinion for the Court rejected the rule previously declared by Justice Holmes in *Baltimore & Ohio Railroad v. Goodman*, 275 U.S. 66 (1927), that a driver of a vehicle approaching a railroad-crossing should not only "stop, look, and listen," but also, if necessary, should get out of his vehicle to check before proceeding across the tracks. Justice Cardozo noted that, by the time one was ready to proceed again after reentering one's vehicle, a train not visible during the outside-the-vehicle check might have drawn dangerously near. 292 U.S. at 104-05.

437 *See supra* Section II.C.

three-quarter-mile-long train, the end of which was not visible to any of the crew: "It was not so unlikely that somewhere in that stretch a person was in a position of potential peril to excuse the crew from taking the inexpensive precaution of blowing the train's horn. Or so at least the jury could conclude without taking leave of its senses."⁴³⁸ However, Posner stated that "we do not say we would have found [the railroad negligent] if we had been the triers of fact."⁴³⁹ Given the admittedly foreseeable (albeit remote) risk, the great magnitude of the potential harm, and the extremely minimal burden of precaution, Posner's inability to draw a definite conclusion while supposedly applying the Hand formula demonstrates, once again, that the Hand formula is, at best, merely window-dressing for conclusions reached on independent grounds.

D. *McCarty v. Pheasant Run, Inc.*

In *McCarty v. Pheasant Run, Inc.*,⁴⁴⁰ the plaintiff, McCarty, was a fifty-eight-year old guest at the defendant's resort hotel in St. Charles, Illinois, a suburb of Chicago. She was attacked and beaten in her second-floor room by an unknown assailant on her first evening at the hotel, after returning from a corporate dinner and business meeting at the hotel. The assailant apparently gained entry to her room through a sliding glass door, covered by full-length drapes, that opened onto a walkway and stairs that led to an area accessible to the public.⁴⁴¹ The police concluded that the sliding glass door had been closed and chained but not locked and had been pried open from the outside, after which the security chain had been broken. They surmised that the intruder had broken into the room while the plaintiff was attending the dinner and business meeting and had hidden in the room until her return. The jury returned a verdict for the hotel. McCarty appealed, arguing that the trial judge should have granted her motion for judgment notwithstanding the verdict. Posner's opinion for the circuit court affirmed the trial judge's denial of her motion,

438 788 F.2d at 1264.

439 *Id.*

440 826 F.2d 1554 (7th Cir. 1987).

441 *Id.* at 1555. The trial court stated that the stairs led to a public parking lot and that Mrs. McCarty had been sexually assaulted and beaten. *McCarty v. Pheasant Run, Inc.*, No. 82 C 1310, 1985 WL 2069 (N.D. Ill. July 31, 1985) (order denying defendant's motion for summary judgment). Posner stated that the stairs led to "a lighted courtyard to which there is public access" and that the assailant "beat and threatened to rape her." 826 F.2d at 1555.

since she had failed to move for a directed verdict on the issue of the hotel's negligence, which is a prerequisite to a judgment n.o.v.⁴⁴²

In *dicta*, Posner engaged in an extensive discussion of the trial judge's alternative ground for denying McCarty's motion: "that the case was not so one-sided in the plaintiff's favor that the grant of a directed verdict or judgment n.o.v. in her favor would be proper."⁴⁴³ Noting that "[t]here are various ways in which courts formulate the negligence standard," Posner stated that "[t]he analytically (not necessarily the operationally) most precise is ... the famous 'Hand Formula' announced in *United States v. Carroll Towing Co.*"⁴⁴⁴ Although he acknowledged that "Illinois courts do not cite the Hand Formula but instead define negligence as failure to use reasonable care, a term left undefined," he claimed, "this is a distinction without a substantive difference."⁴⁴⁵ Describing the Hand formula as a formula that "translates into economic terms the conventional legal test for negligence," he asserted that "the Illinois courts take into account in negligence cases ... the same factors ... in the same relation, as in the Hand Formula. Unreasonable conduct is merely the failure to take precautions that would generate greater benefits in avoiding accidents than the precautions would cost."⁴⁴⁶ Therefore, he noted, "[W]e have not hesitated to use the Hand Formula in cases governed by Illinois law."⁴⁴⁷

Posner acknowledged that rarely, if ever, do the parties provide or the courts require the sort of evidence that is necessary to perform the balancing required by the Hand formula (especially if the formula is given an economic interpretation):

Ordinarily, and here, the parties do not give the jury the information required to quantify the variables that the Hand Formula picks out as relevant. That is why the formula has greater analytic than operational significance. Conceptual as well as practical difficulties in monetizing personal injuries may continue to frustrate efforts to measure expected accident costs with the precision that is possible, in principle at least, in measuring the other side of the equation — the cost or burden of

442 826 F.2d at 1555-56.

443 *Id.* at 1556.

444 *Id.* (citation omitted).

445 *Id.* at 1557 (citations omitted).

446 *Id.* (citing *Hendricks v. Peabody Coal Co.*, 253 N.E.2d 56, 61 (Ill. App. 1969) (discussed at *supra* text accompanying notes 174-82); *Bezark v. Kostner Manor, Inc.*, 172 N.E.2d 424, 426-27 (Ill. App. 1961)).

447 *Id.* (citing *EVRA Corp. v. Swiss Bank Corp.*, 673 F.2d 951, 958 (7th Cir. 1982) (Posner, J.) (*see supra* note 371); *Davis v. Consolidated Rail Corp.*, 788 F.2d 1260, 1263-64 (7th Cir. 1986) (Posner, J.) (discussed at *supra* Section III.C.)).

precaution. For many years to come juries may be forced to make rough judgments of reasonableness, intuiting rather than measuring the factors in the Hand Formula; and so long as their judgment is reasonable, the trial judge has no right to set it aside, let alone substitute his own judgment.⁴⁴⁸

Yet immediately following this admission Posner stated, "Having failed to make much effort to show that the mishap could have been prevented by precautions of reasonable cost and efficacy, Mrs. McCarty is in a weak position to complain about the jury verdict."⁴⁴⁹ Although it might be true that the evidence did not establish the hotel's negligence as a matter of law, in which case the rejection of McCarty's motion for judgment n.o.v. was correct substantively as well as procedurally, Posner's criticism of McCarty's evidence regarding the hotel's negligence is itself weak. McCarty offered evidence that, if believed, almost surely would have been sufficient to find the hotel negligent without regard to any balancing analysis, especially given "the high (not merely the ordinary) standard of care" the hotel was required to maintain under Illinois law "to protect its guests from assaults on the innkeeper's premises."⁴⁵⁰

For example, McCarty presented evidence (incompletely described by Posner) of nine break-ins during the previous two years through the sliding glass doors in the "B" wing of the hotel, where her room was located, and an attempted break-in through a sliding glass door into a "B" room less than a month earlier.⁴⁵¹ She also presented evidence (not noted by Posner) that "[i]n 1980, Sue Baldwin, Pheasant Run's night manager, wrote a note to the general manager, Harry Mondfrans, expressing her concern about defective locks on sliding glass doors."⁴⁵² She attempted to introduce evidence of the hotel's failure to properly maintain the sliding glass doors, of the availability of more effective locks designed to foil intruders, and of the availability of locks that would lock automatically when the sliding glass doors were closed. However, Posner upheld the trial judge's exclusion of all such evidence, apparently assuming that it was agreed at trial that the door was not locked and that it was "merely speculation that if the door had been equipped with a lock that locked

448 *Id.* (citation omitted).

449 *Id.* at 1557.

450 *Id.* at 1558.

451 *Id.* at 1559; *McCarty v. Pheasant Run, Inc.*, No. 82 C 1310, 1985 WL 2069 (N.D. Ill. July 31, 1985).

452 1985 WL at 2069.

automatically when the door was slid closed, the door would not have been left open with merely the safety chain fastened."⁴⁵³

The hotel's leaving the sliding glass door unlocked would seem to be even more negligent than "locking" it with a defective or inadequate lock. Given the significant risk of illegal entry through an unlocked or inadequately locked door, especially considering the prior break-ins, a court surely would uphold a jury verdict that either failure was negligent, despite the lack of any specific evidence on the cost or burden of making sure that all such doors were adequately locked before making rooms available to guests. Indeed, the trial court rejected the hotel's summary judgment motion.⁴⁵⁴ Moreover, the hotel did not warn McCarty about the sliding glass door behind the drapes, and the bellman did not warn her about it or check to make sure it was locked when he took her (through interior corridors) to her room.⁴⁵⁵ She testified that she was unaware of the sliding glass door,⁴⁵⁶ and the trial judge stated in his pre-trial factual findings that "[t]he drapes were closed when McCarty entered the room and she did not open them at any time."⁴⁵⁷

Yet Posner discredited her testimony. Assuming that anyone who opened the drapes would notice the sliding glass door, he asserted that McCarty probably opened the drapes: "Most people on checking into a hotel room, especially at a resort, are curious about the view; and it was still light when Mrs. McCarty checked in at 6:00 p.m. on an October evening."⁴⁵⁸ Posner once again seems to be careless with the facts. The date was October 27, 1981.⁴⁵⁹ Sunset in St. Charles on that date occurred at 4:54 p.m., and "civil twilight" (after which it is too dark for ordinary outdoor activities) ended at 5:23 p.m., the switch from Daylight Saving Time having occurred two days earlier.⁴⁶⁰ After checking in at 6:00 p.m., it would have taken McCarty some time to get to her room, pay the bellman, etc. Moreover, she no doubt was focused on getting ready for the imminent company dinner and business meeting.

Even if McCarty was aware of the sliding glass door and failed to make sure it was locked, and even if her failure to make sure it was locked was

⁴⁵³ 826 F.2d at 1560; *see id.* at 1557.

⁴⁵⁴ 1985 WL at 2069.

⁴⁵⁵ *Id.*; 826 F.2d at 1556.

⁴⁵⁶ 826 F.2d at 1557.

⁴⁵⁷ 1985 WL at 2069.

⁴⁵⁸ 826 F.2d at 1557.

⁴⁵⁹ 1985 WL at 2069.

⁴⁶⁰ *See* http://www.aa.usno.navy.mil/data/docs/RS_OneDay.html. Sunset in Chicago, to the north, occurred two minutes earlier. *See id.*; Calendar, Chi. Trib., Oct. 27, 1981, § 1, at 17.

negligent, the hotel's failure to lock it in the first place before taking a guest to the room and leaving her there would almost surely be negligent.⁴⁶¹ Posner acknowledged that, under the pure comparative responsibility regime then in effect in Illinois, her (alleged) contributory negligence would not bar her recovery.⁴⁶² Yet Posner apparently assumed that the hotel would not be negligent for failing to make sure the sliding glass door was locked if the guest's subsequent failure to make sure the door was locked was negligent:

It is a bedrock principle of negligence law that due care is that care which is optimal given that the potential victim is himself reasonably careful; a careless person cannot by his carelessness raise the standard of care of those he encounters. The jury may have thought it was the hotel's responsibility to *provide* a working lock but the guest's responsibility to *use* it.⁴⁶³

Posner's "bedrock principle" is an essential assumption in his efficiency theory of negligence liability,⁴⁶⁴ but it is not a principle of negligence law. Defendants are often found negligent for having failed to guard and/or warn against foreseeable contributorily negligent conduct by those whom they have put at risk.⁴⁶⁵ Conversely, potential victims of others' negligence are required to guard against foreseeable negligence by those others, unless having to do so would significantly impair the potential victims' rights.⁴⁶⁶ Moreover, as we previously discussed, Posner's assertion that, when using the Hand formula to determine economically efficient conduct by one party to a lawsuit, we assume

461 Although Posner sometimes seems to assume otherwise, *see* 826 F.2d at 1558, 1559, 1560, it is highly unlikely that McCarty knowingly left the door unlocked with only the safety chain fastened.

462 *See id.* at 1559.

463 *Id.* at 1557-58 (emphasis added) (citations omitted). Posner cited as support for this "bedrock principle" only his own opinion in *Davis v. Consolidated Rail Corp.*, 788 F.2d 1260, 1265 (7th Cir. 1986) (discussed at *supra* Section III.C.). Although this supposed principle was stated in *Davis*, it was qualified and disregarded, as it had to be in order to uphold the jury's finding that the railroad had been negligent despite Davis' negligent failure to "blue flag" the train on which he was working, which would have prevented the train from being moved. *See id.* at 1265-66.

464 *See supra* text accompanying notes 320-23.

465 *See, e.g.*, *Gunnarson v. Robert Jacob, Inc.*, 94 F.2d 170 (2d Cir. 1938) (L. Hand, J.) (discussed at *supra* Section I.B.); *Levi v. Sw. La. Elec. Membership Coop.*, 542 So. 2d 1081, 1086 (La. 1989); *Orr v. First Nat'l Stores, Inc.*, 280 A.2d 785, 789-90 (Me. 1971); Restatement (Second) of Torts § 302A (1965); Restatement (Third) of Torts: Products Liability § 2 cmt. p (1998).

466 *See, e.g.*, *Phillips v. Croy*, 363 N.E.2d 1283, 1285 (Ind. App. 1977); *supra* Section II.G.

the other parties were exercising economically efficient care, is viciously circular: to determine the defendant's optimal level of care, one must first know the plaintiff's optimal level of care, which requires first knowing the defendant's optimal level of care, and so forth around the circle.⁴⁶⁷

E. Brotherhood Shipping Co. v. St. Paul Fire & Marine Insurance Co.

In *Brotherhood Shipping Co. v. St. Paul Fire & Marine Insurance Co.*,⁴⁶⁸ the plaintiff sued the City of Milwaukee and the City's insurer, St. Paul Fire & Marine Insurance Co., under admiralty law for damage caused to its freighter by violent wave action while the freighter was in a slip in the city's outer harbor in December 1987. The slip was one of two "bad" slips directly opposite the gap in the breakwater around the harbor, which, as a result of this geometry, were subject to especially severe wave action due to northeastern gales. The gale-whipped waves surged through the gap and reflected off the walls of the slips, creating waves twice as high as the "normal" storm waves, and also spilled over the walls of the slips. Such wave action had caused damage to nine ships berthed in the outer harbor between 1964 and 1979, including one that sank in 1979 while in the slip next to the one that was occupied by the plaintiff's freighter in 1987. Several studies by the City commencing in 1951 had confirmed the unsafe wave conditions in the outer harbor and had recommended remedial measures, such as the construction of a baffle device to reduce the violence of the waves coming through the gap. However, nothing had been done other than the insertion of a notice in the *U.S. Coastal Pilot*, which is a manual used by mariners such as Konstadinou, the Greek captain of the defendant's freighter, in unfamiliar ports. The notice stated: "[V]essels moored in the outer harbor [of the Port of Milwaukee] may be subject to severe surging when there are strong NNE to ENE winds." Nothing was said about the prior history of damaged ships or the especially unsafe conditions in the two "bad" slips. Moreover, the City continued to promote its port as a "harbor of refuge" that provides "everything you'd expect a major world port to have," although unlike major ports, tugs and pilots were not available around the clock.⁴⁶⁹

Konstadinos berthed the freighter, pursuant to directions by a lessee whom a trier of fact might find was the City's agent, in one of the two "bad" slips opposite the gap in the breakwater. At noon the following day, while the

⁴⁶⁷ See *supra* text accompanying notes 323-24.

⁴⁶⁸ 985 F.2d 323 (7th Cir. 1993).

⁴⁶⁹ *Id.* at 324, 327-28.

ship was being loaded, Konstadinos learned from a radio report that a gusty northeaster was brewing. He made some inquiries (but not to the City) and was reassured that he could ride out the storm. At 4:00 p.m., an hour after hearing another weather report about the approaching northeaster, the City's harbor master received a Coast Guard report predicting waves five to twelve feet high and winds of thirty-five to forty knots out of the northeast. He wrote this information, together with the expected duration of the storm (thirty-six hours), at the bottom of a printed "weather notice" that warned, as "information to assist you in determining your course of action" and "not an order to vacate the berth," that "a North and/or Northeast storm is imminent" and "[t]he resultant wave action can be very severe, causing your vessel to pitch, roll and yaw. These actions may be separate or simultaneous. This may result in damage to your vessel and/or the dock structure." However, the harbor master waited until he left for home to deliver the notice to Konstadinos, who immediately sent for a pilot to direct the ship to a safer berth. However, despite the approaching storm, the pilot had also already left for the day, and there were no tugs or linesmen available at that hour even had Konstadinos wanted to risk leaving his berth without a pilot. By the time the pilot arrived at 11:30 p.m., the storm was too severe for the ship to leave the berth. It continued to worsen until, at 6:15 a.m., the stern ropes broke and the stern of the ship was dashed against the wall of the slip, resulting in alleged damages of \$4.5 to \$5 million in repair costs and lost revenue while the ship was out of service.⁴⁷⁰

Despite the preceding facts and admiralty law's rule of pure comparative responsibility, according to which the plaintiff can recover from a negligent defendant in proportion to the defendant's percentage of comparative responsibility no matter how small that percentage might be, the trial judge entered a summary judgment in favor of the defendant City of Milwaukee (and its insurer).⁴⁷¹ Posner's opinion for the court reversed the summary judgment,

apply[ing] the standard of negligence laid down by Judge Hand in the famous admiralty case of *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947), endorsed by this court as the proper admiralty standard in *United States Fidelity & Guaranty Co. v. Jadranska Slobodna Plovidba*, 683 F.2d 1022 (7th Cir. 1982) Negligence is especially likely to be found if B [the burden/cost of

⁴⁷⁰ *Id.* at 328-29.

⁴⁷¹ *Id.* at 324-25.

precaution] is low and both P and L (and therefore PL, the expected accident cost) are high.⁴⁷²

As Posner pointed out, in this case L was very large, P was substantial, and B was arguably (very) low. At the very least, the City could have given the weather notice to Konstadinos earlier, before the close of business for the pilot and tugs at 5:00 p.m. It could have arranged for pilots and tugs to be available on a standby basis at least when northeastern storms were imminent. It could have initially directed the freighter to a safer berth, if one were available, or provided a more explicit warning in the *U.S. Coastal Pilot* regarding the nature, frequency, and severity of the risk of damage from northeasters to ships in the outer harbor, especially those in the two "bad" slips. Perhaps, Posner suggested, the installation of a baffle or some other structural alteration of the outer harbor would be cost-justified.⁴⁷³

Given the (very) low cost of all but the last suggested precaution, Posner's statement that "[m]aybe every one of these precautions would have cost more than the benefit in averting the accident"⁴⁷⁴ is startling. If it is read literally, as stating that it would be reasonable to find under the Hand formula that the defendant was not negligent (due, perhaps, to the low frequency of damaged ships), it dramatically illustrates the divergence between the aggregate-risk-utility test of negligence and ordinary notions of reasonable conduct. More likely, given the context of the case, it should be read as merely indicating that the summary judgment was improper because it was at least debatable whether every one of the precautions would have cost more than the benefit in averting the accident. Whatever reading is intended, the pertinent point with respect to our inquiry is that no actual application of the Hand formula was undertaken with respect to any of the suggested precautions. Moreover, given the admittedly substantial risk and the very low cost of most of the precautions, the case is not one that serves as a real test of the supposed aggregate-risk-utility definition of negligence. Any actual application of the aggregate-risk-utility test would have been, as usual, mere window-dressing laid on top of, and attempting to draw credibility from, the justice-based test of reasonableness. In this participatory-plaintiff case, which also involves a socially valuable activity, the risks to the plaintiff would be deemed reasonable only if they were not too serious, necessary in order for the participants (or everyone in society) to obtain some desired benefit from the activity, reduced to the maximum extent feasible without significantly

⁴⁷² *Id.* at 327; *see id.* at 330.

⁴⁷³ *Id.* at 329-30.

⁴⁷⁴ *Id.* at 329.

impairing the desired benefit, and significantly outweighed by the desired benefit.⁴⁷⁵ In this case, given the facts stated, none of these conditions were met, so the City clearly was negligent.

F. *Navarro v. Fuji Heavy Industries, Ltd.*

In *Navarro v. Fuji Heavy Industries, Ltd.*,⁴⁷⁶ the plaintiff, Navarro, was thrown from and crushed by her automobile when its rear suspension suddenly and unexpectedly gave way as a result of having rusted through from the inside out, so that there was no visual clue from the outside that the suspension was about to give way. The car was over ten years old and had 125,000 miles on its odometer. Navarro alleged that the suspension was defectively designed, since it could rust through with no visual evidence of such deterioration. Her strict liability claim, but not her negligence claim, was barred by an Illinois statute of repose. The trial judge granted summary judgment in favor of the defendant manufacturer on the ground that Navarro had failed to present sufficient evidence of a defective design.⁴⁷⁷ Posner's opinion for the court affirmed, since Navarro had failed to introduce any evidence to establish that the manufacturer knew or should have known, at the time that the car was manufactured, that the suspension might rust without any visible indication of such rusting.⁴⁷⁸

In *dicta*, Posner stated that "there is little or no practical difference in a case of defective design" between strict liability or a negligence standard of liability: "whether the design was defective is determined by use of the same Hand-formula or cost-benefit approach that is used to determine negligence in a tort case not involving a product."⁴⁷⁹ The *Navarro* case was governed by Illinois law, and Posner, citing the leading Illinois Supreme Court decision, *Lamkin v. Towner*,⁴⁸⁰ acknowledged that "the cases frequently offer the plaintiff a choice between proving that the design was defective and proving that it was not as safe as the consumer would reasonably have expected."⁴⁸¹ However, he claimed, "this comes to the same thing; the consumer expects the products he buys not to be defectively

475 See *supra* Sections II.C., II.D., II.E.

476 117 F.3d 1027 (7th Cir. 1997).

477 *Id.* at 1028-29.

478 *Id.* at 1031-32.

479 *Id.* at 1029 (citing three Seventh Circuit cases, including *Bammerlin*).

480 563 N.E.2d 449, 457 (Ill. 1990).

481 117 F.3d at 1029.

designed."⁴⁸² Posner has again misstated the applicable legal doctrines. The consumer-expectations test and the risk-utility test are two distinct, non-equivalent tests of product defectiveness. Indeed, the differences between the two tests were a major source of debate for several years in the American Law Institute, which, for the most part, rejected the consumer-expectations test in the Restatement (Third) of Torts: Products Liability,⁴⁸³ but retained it for food products and for "a product that manifestly fails to perform its intended function."⁴⁸⁴ Many courts have emphasized the differences between the two tests, while continuing to employ the consumer-expectations test as an alternative or sole test of a defective design.⁴⁸⁵ Illinois is one of those states: the *Lamkin* decision followed the California Supreme Court's decision in *Barker v. Lull Engineering Co.*⁴⁸⁶ by adopting the consumer-expectations test and a risk-utility test (with the burden of proof shifted to the defendant) as distinct, alternative tests of a defective design.⁴⁸⁷ Moreover, as we have previously noted, the risk-utility test for a defective design is not the efficiency-based aggregate-risk-utility test propounded by Posner and Easterbrook, but rather the justice-based prohibitive-cost test that is appropriate for assessing risks that defendants create to participatory plaintiffs.⁴⁸⁸ In any event, once again, Posner made no attempt to apply the Hand formula in *Navarro*.

G. *Halek v. United States*

The most recent case in which Posner cited *Carroll Towing* is *Halek v. United States*.⁴⁸⁹ The plaintiff Halek was injured while servicing an elevator at the Great Lakes Naval Training Center in Illinois. The elevator machinery

482 *Id.*

483 See Restatement (Third) of Torts: Products Liability § 2 cmts. d, g (1998).

484 See *id.* § 2 cmts. b, g, h; *id.* § 3 cmt. b.

485 See, e.g., *Lamer v. McKee Indus., Inc.*, 721 P.2d 611 (Alaska 1986); *Soule v. General Motors Corp.*, 882 P.2d 298 (Cal. 1994); *Potter v. Chicago Pneumatic Tool Co.*, 694 A.2d 1319 (Conn. 1997); *Lester v. Magic Chef, Inc.*, 641 P.2d 353 (Kan. 1982); *Woods v. Freuhauf Trailer Corp.*, 765 P.2d 770 (Okla. 1988); *Denny v. Ford Motor Co.*, 662 N.E.2d 730 (N.Y. 1995); *Knitz v. Minster Mach. Co.*, 432 N.E.2d 814, *cert. denied*, 459 U.S. 857 (Ohio 1981); *McCathern v. Toyota Motor Corp.*, 985 P.2d 804 (Or. App. 1999); *Ray v. Bic Corp.*, 925 S.W.2d 527 (Tenn. 1996); Annotation, *Products Liability: Consumer Expectations Test*, 73 A.L.R.5th 75 (1999).

486 573 P.2d 443 (Cal. 1978).

487 See *Lamkin v. Towner*, 563 N.E.2d 449, 457 (Ill. 1990).

488 See *supra* text accompanying notes 222-26.

489 178 F.3d 481 (7th Cir. 1999).

was located in a small room at the top of the building. For safety reasons, the Navy had placed an aluminum mesh cage, which was bolted to the floor, over the large pulley over which ran the cables that raised and lowered the elevator. The cage had an opening on one side directly in front of the pulley to provide access for servicing the pulley assembly.⁴⁹⁰ Posner further described the facts leading up to Halek's injury as follows:

Halek had shut off the power to do some work on the elevator machinery and in the course of this work he mislaid a bolt. After he finished the work and turned the power back on he noticed the bolt lying in the narrow space between the pulley and the aluminum mesh cage. Had the cage not been there, Halek could easily have retrieved the bolt from the side; the bolt would have been between the pulley and him. But with that access blocked by the cage, Halek had to reach around the cage, to the open space in front of the pulley, and when he tried to do this his glasses caught in the mesh and when he tried to adjust them he tripped and his hand caught in the pulley — which was now moving, because someone had summoned the elevator just as Halek was reaching for the bolt.⁴⁹¹

Applying Illinois law, as specified by the Federal Tort Claims Act,⁴⁹² the trial judge found that the Navy had been negligent, but reduced Halek's damages by 20% due to his contributory negligence. On appeal, the government contested the finding that the Navy had been negligent. Posner held:

Given the gravity of the injury that was likely to occur to anyone who fell into the machinery, the nontrivial probability of getting caught in unshielded machinery if one is working in close proximity to it, and the trivial expense of making the cage easily removable and therefore safe, the district judge was justified in finding that the Navy had been negligent.

Unless the danger was so obvious to the people working on the elevator machinery, or so easily avoidable by them (Halek had only to turn off the power to be entirely safe in reaching for the bolt), that the probability of an accident was really quite negligible. For in that event the failure to take precautions against such an accident might not have been negligent, cheap as those precautions would have

490 *Id.* at 483-84.

491 *Id.*

492 28 U.S.C. § 2674 (2001).

been. Negligence is a function of the likelihood of an accident as well as of its gravity if it occurs and of the ease of preventing it, e.g., ... *McCarty v. Pheasant Run, Inc.*, 826 F.2d 1554, 1556-57 (7th Cir. 1987) (applying Illinois law) [Posner, J.], *Bammerlin v. Navistar Int'l Transportation Corp.*, 30 F.3d 898, 902 (7th Cir. 1994) [Easterbrook, J.], *Liriano v. Hobart Corp.*, 132 F.3d 124, 131 n. 12 (2d Cir. 1998) [Calabresi, J.]; *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947) (L. Hand, J.)

... The danger could be averted by turning off the power; but a person who did not recognize the danger would not take this precaution, and we cannot say with sufficient confidence to warrant overturning the trial judge's finding ... that the danger was so obvious that the Navy could not be thought negligent for having created the cramped space by making the aluminum mesh cage difficult to remove — that, in other words, the danger was warning enough to eliminate any significant risk of injury.⁴⁹³

Although Posner seems to assume otherwise, the fact that a risk is obvious to and known by those put at risk does not necessarily render it negligible or non-negligent, especially if the risk was needless.⁴⁹⁴ Conversely, as Posner recognizes, it is not at all clear that the risk created by making the cage difficult to remove was needless or, to put it another way, that the burden of making the cage easily removable was trivial. Making the cage easily removable, so that the pulley assembly would be completely unguarded, might well create greater risks of injury to others who might have occasion to be in the room near the pulley assembly or to Halek himself.⁴⁹⁵ Posner avoids this complication by noting that the government did not raise this argument, but rather argued that, given the obviousness of the risk and Halek's leaving the power on, the Navy should have been found not negligent as a matter of law or at least less negligent than Halek (which would have barred Halek's recovery under Illinois's comparative responsibility rules).⁴⁹⁶

In the end, rather than attempting to apply the Hand formula, or insisting that the plaintiff produce quantitative evidence on the risks and the

493 178 F.3d at 484 (citations omitted).

494 See Restatement (Third) of Torts: Products Liability § 2 cmt. 1 (1998).

495 *Halek*, 178 F.3d at 485 (Posner mentions cleaning people, but not Halek himself); cf. *Cooley v. Public Service Co.*, 10 A.2d 673 (N.H. 1940) (discussed at *supra* text accompanying notes 253-59).

496 178 F.3d at 485-86.

defendant's burden of precaution,⁴⁹⁷ Posner concluded: "[T]o call [Halek's] failure [to turn off the power] *more* negligent than the Navy's failure to design a proper cage would require us to make the kind of guess that is reserved to the finder of fact, other than in hopelessly one-sided cases, which this is not, or in any event not quite."⁴⁹⁸ Indeed, given the impossibility of having information sufficient to apply the Hand formula except in "hopelessly one-sided cases," especially in the marginal form required by the efficiency theory, Posner and other proponents of the aggregate-risk-utility test are left to mere guesses, or coin-flipping. As was pointed out in the first formal efficiency analysis of the negligence issue, such guesses are more likely to promote inefficiency than efficiency.⁴⁹⁹

CONCLUSION

In this article, I have argued that the common assumption that negligence is defined by an aggregate-risk-utility test is an academic myth. If one turns from the academic discussions of negligence law to the actual cases, it immediately becomes clear that the aggregate-risk-utility test of negligence that is set forth in Learned Hand's formula, in the various editions of the Restatement, and in Richard Posner's academic writings is almost never referred to in jury instructions, is seldom referred to in judicial opinions, and is inconsistent with the actual criteria applied by the courts in various types of situations. If one then follows the legal realists' advice and looks carefully, in those cases in which the aggregate-risk-utility test is mentioned, at what the courts are actually doing rather than (merely) at what they are saying, one finds that the courts almost never attempt to apply the test; instead, the test is merely trotted out as *dicta* or boilerplate separate from the real analysis. The very few judges who actually try to apply the test either fail in the attempt to do so or end up using the test as window-dressing for results reached on other (justice-based) grounds. As this article has documented, this is true even for the two judges who have been the strongest advocates of the aggregate-risk-utility test, Learned Hand and Richard Posner, as well as for Posner's like-minded colleague Frank Easterbrook.

Along the way, I have sought to identify and elaborate the criteria of reasonableness that actually are applied, explicitly or implicitly, by the courts

497 Compare Posner's stance in *McCarty*, which is discussed in *supra* Section III.D.

498 178 F.3d at 486.

499 See Brown, *supra* note 324, at 332-33, 343-44, 346-47.

in various types of situations, to explain how these tests implement the basic principles of justice, and to contrast these tests and the principles of justice that underlie them with the morally bankrupt utilitarian-efficiency theory that underlies the Hand formula's aggregate-risk-utility test. Through this article and related articles,⁵⁰⁰ I hope to encourage more explicit recognition and use of the justice-based tests and principles of negligence liability and to discourage continued adherence, by both academics and (some) courts, to the myth of the Hand formula.

⁵⁰⁰ See, e.g., Wright, *supra* note 1; Wright, *supra* note 4; Wright, *supra* note 6; Wright, *supra* note 14; Wright, *Principled Adjudication*, *supra* note 23.