

5-1-2001

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Recommended Citation

William E. Nelson, *The Moral Perversity of the Hand Calculus*, 45 St. Louis U. L.J. (2001).
Available at: <https://scholarship.law.slu.edu/lj/vol45/iss3/7>

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THE MORAL PERVERSITY OF THE HAND CALCULUS

WILLIAM E. NELSON*

In every year that I have taught the first-year course in Torts at New York University School of Law, I have used a particular hypothetical to illustrate the moral perversity of the Hand calculus of risk standard,¹ especially as the standard has been interpreted in Richard Posner's classic article entitled *A Theory of Negligence*.² Every torts hypothetical must have a locale, and the locale I have always used is a subway station located one block away from the Law School—a station well known to all my students. But as readers will see from my description of the station, other locales almost anywhere in the United States could readily be substituted.

Trains enter the southern end of the station along a slight curve at a speed of approximately thirty miles per hour. Because of the curve and a wall that blocks their vision, passengers standing on the station's platform cannot see a train until it enters the station, although they can hear it coming earlier. Similarly, the train's motorman cannot see the platform until the train enters the station, nor does the motorman have an unobstructed view of most of the length of the track within the station. Standard practice is for motormen to begin applying brakes gradually upon entering the station so that the eight-car train will stop by the time the first car reaches the distant end of the station's platform. An essential fact in the hypothetical is that New York subway trains are equipped with automatic braking devices that will stop them almost immediately if they strike any object lying on the track.

Now assume that a law student, Buster, is leaning against the wall at the southern end of the station waiting for a train. Just as he hears a train beginning to approach, he sees a mugger midway along the platform push a fellow law student, Charity, onto the track, at a point where the motorman's view of the track is obstructed. Buster immediately realizes that, in the ordinary course of events, the train will not have fully stopped by the time it reaches the place where Charity is now lying unconsciously on the tracks and hence that she will soon be struck by the train and killed.

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1. The standard was clearly articulated by Judge Learned Hand for the first time in *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947).

2. Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29 (1972).

But Buster also can save Charity's life. Standing next to Buster is a homeless person. If Buster immediately pushes the homeless person onto the tracks, the train will strike and kill that person, the automatic braking mechanism will be triggered, and the train will come to a halt before it strikes Charity. Charity's life will be saved. Buster's question is whether he will have any tort liability to the heirs or estate of the homeless person whose life will have been sacrificed in order to save Charity's.

According to Judge Learned Hand's calculus of risk standard, Buster will not be liable. In his now famous opinion in *United States v. Carroll Towing Co.*, Judge Hand described a tug owner's duty to provide against injuries as "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."³ For Judge Hand, "liability depends upon" an efficiency calculation of whether the gain from imposing an injury is greater or lesser than the gravity of the injury multiplied by the probability that it will occur; if the gain is less, a defendant is liable for injuries resulting from the gain, but if the gain is greater, a defendant is not negligent and will not be liable.⁴

In my hypothetical, the probabilities all are one hundred percent: if Buster pushes the homeless person onto the track, the homeless person will die and Charity will be saved, whereas if Buster does not push the homeless person, that person will live and Charity will die. Thus, the issue of Buster's liability depends solely on the comparative worth of Charity and the homeless person. As I understand Posner's *A Theory of Negligence*, Charity, who as a law student has more promising employment prospects than the homeless person, is worth more than the homeless person, and Buster will not incur liability in deciding to sacrifice one life in order to save a life of greater worth.⁵

One might accept the insight of law and economics that social efficiency is a good thing. Arguably, it follows that, when it is necessary to choose which of two lives should be sacrificed in order to save the other, the life of a socially unproductive individual should be sacrificed to save that of a socially productive one. One might also argue that ties of friendship or even love (perhaps, Buster and Charity are a couple) justify Buster's taking someone else's life in order to save Charity's, if that is the only way in which Charity's life can be saved. On the other hand, one might condemn the moral arrogance of Buster and similar people who feel free to make judgments about the value of other peoples' lives, simply because they have concluded that some useful

3. *Carroll Towing*, 159 F.2d at 173.

4. *See id.* *See also* Posner, *supra* note 2, at 32.

5. Even if one judges both lives to be of equal worth, Buster will not be liable under the Hand calculus because the value of what is being sacrificed—the homeless person's life—does not exceed the value of what is being saved—Charity's life.

end justifies the sacrifice of a person's life. One might condemn the arrogance of others even when they have calculated social utility correctly.

I simply find myself conflicted about when, if ever, it is right to save one person's life by sacrificing another's. When I see a large truck barreling down on my car in a way that will kill my child (but not me), I do not know whether or not I should swerve to avoid the truck in a way that will cause my car to strike and kill a pedestrian on the sidewalk. My torts classes have been similarly conflicted. Although a few individual students have clear answers to the hypotheticals I have posed, my classes have never reached a consensus.

But ultimately the Hand calculus is not about social efficiency, love, friendship or moral arrogance. It is only about compensation. The Hand calculus does not tell an entrepreneur whether or not to engage in conduct that will hurt one person and help another. It does not tell Buster whether to sacrifice the homeless person in order to save Charity. The Hand calculus serves a much narrower function. It tells an entrepreneur only that, if she engages in conduct that causes others to lose more than she gains, she will have to compensate them for their losses, but that, if she gains more than they lose, no duty of compensation will arise. It tells Buster only that, assuming Charity's life is worth more than the life of a homeless person, he will have no liability to the homeless person's heirs or estate when he takes the homeless person's life to save Charity's.

It is this very narrowness of the Hand calculus that makes it so morally perverse, as a slight change in the facts of my hypothetical will show. Assume now that the homeless person is not standing alone but with a shopping cart containing all his worldly goods. Assume further that Buster pushes the shopping cart and not the homeless person onto the tracks. When the train strikes the cart, its contents are destroyed, but the automatic braking mechanism is triggered and the train stops before reaching Charity. Thus, Charity's life is saved at the cost of the contents of the shopping cart.

Under these changed facts, my moral intuitions become clear. If I can save one person's life by destroying another person's property, I believe I ought to do so, especially if the property has little monetary value. Life is simply worth more than a trivial amount of property. But my moral intuitions also tell me that the person whose property I destroyed deserves compensation for its value—either from the person whose life I saved or from me. Over the years I have used this modified hypothetical with first-year students, few have disputed my intuitions that Charity should be saved and that the homeless person should be compensated for his loss of property.

The Hand calculus is perverse because it does not point to this result. Since Charity's life is worth more than the homeless person's few possessions, the Hand calculus informs us that the right decision is to save Charity's life. It also informs us, however, that since compensation is required only in cases of wrong decisions, the homeless person is not entitled to compensation.

Fortunately, the Hand calculus does not have as broad a reach as I have so far assumed in addressing my hypotheticals. It is not the sole test for determining whether an actor is negligent and thus liable for tortious harm. Another important rule, elaborated by Judge Benjamin N. Cardozo in *Martin v. Herzog*,⁶ is that violation of a criminal statute constitutes negligence and renders the criminal liable for any damages suffered by innocent victims. In my hypotheticals, one of two criminal statutes has been breached—either statute prohibiting the intentional taking of another’s life, or the statute prohibiting the intentional taking of another’s property. Moreover, the homeless person has suffered damages from breach of one of these statutes, in the form of either loss of life or loss of property. As a result, *Martin v. Herzog* requires the payment of damages.

In the absence of statutes, however, the Hand calculus becomes decisive and can lead to quite dubious results. Consider, for example, the case of *Pulka v. Edelman*.⁷ In this case, a driver of an automobile carelessly exited a parking garage in New York City and struck a pedestrian who was walking on the sidewalk that separated the garage’s exit from the street. Unfortunately, the driver lacked adequate insurance or other resources to pay the pedestrian’s damages and the pedestrian therefore sued the owner of the garage. The plaintiff claimed that the parking garage owner should be liable to pedestrians like himself who were struck by drivers carelessly exiting from the garages on the ground that garage owners could foresee that such accidents would happen and therefore were under a duty to take steps to prevent them.⁸

The New York Court of Appeals rejected the plaintiff’s argument. The opinion of the majority of the court held that liability should not be imposed on a party “where the realities of every day experience show us that, regardless of the measures taken, there is little expectation that the one made responsible could prevent the negligent conduct.”⁹ With the Hand calculus in the background of its thinking, the *Pulka* majority concluded that parking garages have great social utility in New York City, that the cost to garage owners of trying to stop drivers from exiting their garages negligently would exceed whatever safety benefits their efforts might bring, and hence that the occasional victims of negligent parkers rather than garage owners should bear the costs of their injuries.¹⁰ It is difficult to question the outcome of *Pulka v. Edelman* if one assumes that the Hand calculus, as interpreted in Judge Posner’s *A Theory of Negligence*,¹¹ constitutes the applicable rule of law.

6. 126 N.E. 814, 816 (N.Y. 1920).

7. 358 N.E.2d 1019 (N.Y. 1976).

8. *Id.* at 1020.

9. *Id.* at 1022.

10. *Id.* at 1023.

11. *See* Posner, *supra* note 2.

But Judge Posner's Hand calculus need not be the applicable rule. Indeed, in *Pulka* itself, the application of the Hand calculus produced a dissenting opinion, which relied on what it labeled "the classic language of *Palsgraf*."¹² According to the dissenters, application to *Pulka* of the rule in *Palsgraf v. Long Island Railroad Co.*¹³ required a different holding—that, since "the nature of . . . [being in] business as a public garage operator attracted the flow of automobile traffic across the public sidewalk" for profit, the garage operator had a duty not to "close his eyes to . . . pedestrians who are thereby imperiled" and to compensate them for any injuries they suffered as a result of the existence of its profitable garage.¹⁴

As I have argued elsewhere, the dissenters in *Pulka* did not misread *Palsgraf v. Long Island Railroad*,¹⁵ which, contrary to the current wisdom, reflected the culmination of a multi-decade conflict between two competing theories of tort liability.¹⁶ One theory, which looked back to nineteenth-century assumptions that everyone "[i]n a commercial country . . . to some extent" ran the "hazard of his neighbor's conduct,"¹⁷ focused on the doctrine of proximate cause as a limitation on tort liability. Using that doctrine, nineteenth and early twentieth century judges had set aside jury verdicts for plaintiffs on the ground that a defendant's negligence had contributed too remotely to a plaintiff's injury or that some other cause had intervened to break the causal connection between the negligence and the injury. The newer, competing theory held that entrepreneurs who set in motion chains of events, which they could foresee would cause injuries, however remotely, to others were responsible in damages for those injuries.

Writing for the *Palsgraf* majority, Chief Judge Benjamin N. Cardozo adopted the newer theory of broad entrepreneurial liability.¹⁸ Cardozo proclaimed that a finding that a defendant had been negligent "would entail liability for any and all consequences, however novel or extraordinary," and that liability for negligence depended only on the mental state of a defendant rather than the consequences of his actions.¹⁹ In particular, the Chief Judge held that the doctrine of proximate cause would not limit liability as the dissenting opinion of Judge William S. Andrews suggested it had traditionally done in New York law; in Cardozo's words, "[t]he law of causation, remote or

12. *Pulka*, 358 N.E.2d at 1023 (dissenting opinion).

13. 162 N.E. 99 (N.Y. 1928).

14. *Pulka*, 358 N.E.2d at 1023.

15. 162 N.E. 99 (N.Y. 1928).

16. See WILLIAM E. NELSON, *THE LEGALIST REFORMATION: LAW, POLITICS, AND IDEOLOGY IN NEW YORK, 1920-1980*, at 93-100 (2001).

17. *Ryan v. New York Cent. R.R. Co.*, 35 N.Y. 210, 216 (1866).

18. *Palsgraf*, 162 N.E. at 100.

19. *Id.* at 101.

proximate, is thus foreign to the case before us.”²⁰ On the contrary, Cardozo and a majority of the court of appeals in *Palsgraf* declared people in positions of power responsible in damages if they foresaw harm resulting from their actions, however remote the harm might be, by whatever indirection it might be produced, and however profitable the activity producing the harm might be to the defendant.²¹

Nor was *Palsgraf* alone in holding defendants liable for harms that they had only remotely caused. As the 1933 case of *Smith v. Lampe*²² explained in dictum, “reasonable anticipation of injury is important . . . in determining negligence, while the natural course of events is the test of required causation.”²³ Similarly, the New York Court of Appeals declared in *Philpot v. Brooklyn National League Baseball Club, Inc.*²⁴ that “[o]ne who collects a large number of people for gain or profit must be vigilant to protect them”²⁵ and held that the Dodgers had not been sufficiently vigilant in protecting a spectator from being struck by a broken glass bottle apparently thrown by another spectator.

At least in the 1930s, Judge Learned Hand went along with the *Palsgraf* standard holding defendants liable for foreseeable harms even when the balance of social utility would have justified the imposition of harm. *The No. 1 of New York*,²⁶ decided by the Second Circuit Court of Appeals in 1932, will illustrate the nonutilitarian character of tort doctrine at the time. In *The No. 1 of New York*, a New York City drawbridge operator who had opened a bridge for a tug and its tow then closed it to permit fire engines to pass, with the result that one of the barges in tow collided with the bridge. The court held that “a bridge owner” who had once opened a bridge could “not withdraw his consent to the passage, even in the exigency of a demand by fire apparatus responding to an alarm, at a time when withdrawal should reasonably be foreseen as endangering the vessel.”²⁷ The noteworthy fact about this opinion is that the court, consisting of Judge Swan and the two Hand cousins, Learned and Augustus, never asked what seemed quite likely—whether the harm that would have been done by not allowing the fire engines to pass outweighed the harm that occurred to the barge. All that mattered was that the bridge operator, having undertaken a duty to the tug and its tow, could not fail to perform that

20. *Id.*

21. *Id.* at 104-05.

22. 64 F.2d 201 (6th Cir. 1933).

23. *Id.* at 203.

24. 100 N.E.2d 164 (N.Y. 1951).

25. *Id.* at 166 (citations omitted).

26. 61 F.2d 783 (2d Cir. 1932).

27. *Id.* at 784.

duty even when it could foresee that great harm would result from the duty's performance.²⁸

Nonetheless Judge Learned Hand, although he joined the Second Circuit opinion in *The No. 1 of New York*, had his doubts. Thus, at a meeting of the American Law Institute discussing the broad theory of liability propounded by Cardozo in *Palsgraf*, Judge Hand indicated his acceptance of the essence of the theory, but also expressed a concern that the theory might be carried too far. To quote Hand's colorful, informal language, he thought it would be "monstrous" to "ruin a man for a momentary dereliction" by "attribut[ing] to an act every consequence which is likely to result."²⁹

Hand acted on his concern in another 1932 federal case, *Sinram v. Pennsylvania Railroad Co.*³⁰ On the issue of whether a tug which rammed and damaged an empty barge above the waterline was liable for loss of a subsequently loaded cargo of coal which caused the barge to take on water through the damaged area and thereafter to sink, Judge Learned Hand declared that "we are not bound to take thought for all that the morrow may bring, even though we should foresee it."³¹ Although a tug operator who thought enough about "the precise train of events" that might follow a collision would have foreseen the sinking, the foreseeability "canon," according to Hand, was "more equivocal than appears on the surface," and "ignore[d] the excuses for much conduct . . . likely to involve damage to others."³² Duties, Hand continued, were "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."³³

Since *Sinram* was decided the same day by the same unanimous three-judge panel that resolved *The No. 1 of New York*, it is difficult to interpret it as an explicit, early statement of the calculus of risk standard later put forward by Hand in *Carroll Towing*. Hand did not totally reject the *Palsgraf* principle of liability for all foreseeable harm. At most, *Sinram* implied that a tug operator's interest in getting its job done quickly and efficiently outweighed the costs of theoretically foreseeable but highly improbable accidents, such as the one that had occurred when the damaged barge was loaded without any inspection for potential leaks.

What does all this tell us about Judge Learned Hand's calculus of risk standard? Surely, much can be said on behalf of efficiency. Undoubtedly, there are situations in which one of two people must die so that the other may live. Much can be said for candidly facing up to the need to make such tragic

28. *Id.*

29. ANDREW L. KAUFMAN, CARDOZO 290-91 (1998) (quoting discussions from the October 23, 1927 meeting discussing the American Law Institute's Restatement of Torts).

30. 61 F.2d 767 (2d Cir. 1932).

31. *Id.* at 771.

32. *Id.*

33. *Id.*

choices³⁴ and for choosing life for the person who, if allowed to live, will return the greater benefit to society. Of course, the Hand calculus is not about tragic choice but only about compensation. However, there may be efficiency reasons associated with transaction costs for denying compensation. It could be argued, for example, that fear of legal entanglements will deter Buster from pushing the homeless man on the subway track in order to save Charity and that, if society wants people in positions like that of Charity to be saved, the legal system must proclaim rules that deter tort victims from bringing suit when they suffer harms which bring benefit to others. It also might be argued that no suit should lie on behalf of the homeless man to recover the value of his shopping cart and its contents; the cost of bringing suit, it would be said, so far outweighs the value of the cart and contents that litigation would be inefficient. We might hope that Charity would be so thankful for her life being saved that she would offer the homeless person a reward, but it would be counterproductive to use the law to require her to do so.

Others, of course, might find such rigid efficiency analysis “monstrous”—to use the felicitous adjective employed by Learned Hand. They might object to the arrogance of Buster in deciding whether Charity or the homeless man should live; they might think that the law owes protection to the physical integrity of all people, even the poorest and lowliest. They might think me guilty of homicide if I were to run down and kill a pedestrian in order to save the life of my child. They might want to hold me liable for any harm to strangers flowing from my pursuit of my self-interest.

There is also a third way to think about the issues we have been discussing. Perhaps what Hand found “monstrous” was not the particular rule he was questioning but the rigidity of that rule. For the same reason, Hand might find Posner’s interpretation of his calculus of risk similarly monstrous. Perhaps we should understand Hand to be urging judges to treat his own calculus of risk, like any other rule of law, as “more equivocal than appears on the surface.”³⁵ It may be that Hand was not engaging in utilitarian comparison when he formulated his test in *Carroll Towing* but was instead focusing on human frailty—on the inability of people to perceive clearly everything that they would be able to foresee if they gave careful consideration to every choice they had to make. On this reading, I would not be liable if, in order to avoid having my car struck by a truck, I swerved onto a sidewalk and unintentionally hit a pedestrian whose presence I would have foreseen if I had given it any thought, although I would be liable if I intentionally struck the pedestrian because it was the only way to avoid the death of my child. Similarly, Buster would not be liable if in his effort to save Charity’s life by pushing the homeless man’s shopping cart onto the track he unintentionally but foreseeably pushed the man

34. Cf. GUIDO CALABRESI & PHILIP BOBBITT, TRAGIC CHOICES (1978).

35. *Sinram*, 61 F.2d at 771.

instead, but he would be liable if he pushed the man onto the track intentionally, even if by all accounts the man's life had less value than Charity's and there was no other way to save Charity. In sum, it might be right to understand the Hand calculus as a device for articulating our moral intuitions rather than a device for superceding them.

I do not propose to end this essay with any clear-cut conclusion. Like a law professor who presents a class with a hypothetical, I mean only to raise questions, not to resolve them. I hope, however, that my hypothetical will enable my readers to elaborate their own moral intuitions and articulate their policy preferences more clearly and thereby to resolve for themselves some of the difficult, basic issues of tort law that Learned Hand's calculus of risk standard presents.

