

**NELCO**  
**NELCO Legal Scholarship Repository**

---

New York University Law and Economics Working  
Papers

New York University School of Law

---

4-29-2009

# Efficiency, Fairness, and the Economic Analysis of Tort Law

Mark A. Geistfeld

*NYU School of Law*, [geistfeld@exchange.law.nyu.edu](mailto:geistfeld@exchange.law.nyu.edu)

Follow this and additional works at: [http://lsr.nellco.org/nyu\\_lewp](http://lsr.nellco.org/nyu_lewp)



Part of the [Jurisprudence Commons](#), and the [Law and Economics Commons](#)

---

## Recommended Citation

Geistfeld, Mark A., "Efficiency, Fairness, and the Economic Analysis of Tort Law" (2009). *New York University Law and Economics Working Papers*. Paper 184.

[http://lsr.nellco.org/nyu\\_lewp/184](http://lsr.nellco.org/nyu_lewp/184)

This Article is brought to you for free and open access by the New York University School of Law at NELCO Legal Scholarship Repository. It has been accepted for inclusion in New York University Law and Economics Working Papers by an authorized administrator of NELCO Legal Scholarship Repository. For more information, please contact [tracy.thompson@nellco.org](mailto:tracy.thompson@nellco.org).

## **Efficiency, Fairness, and the Economic Analysis of Tort Law<sup>†</sup>**

Mark A. Geistfeld<sup>\*</sup>

Throughout its history, the economic analysis of tort law has been largely limited to one question: How should tort rules be formulated so as to minimize the

---

<sup>†</sup> The final version of this manuscript has been published in Theoretical Foundations of Law and Economics (Mark D. White ed., Cambridge University Press, 2009).

<sup>\*</sup> Crystal Eastman Professor of Law, New York University School of Law. I gratefully acknowledge the helpful comments, provided at various points throughout the evolution of this project, from Richard Abel, Jennifer Arlen, Ronen Avraham, Oren Bar-Gill, Robert Cooter, Richard Craswell, Barry Friedman, John Goldberg, Gregory Keating, Lewis Kornhauser, Stephen Perry, Mitchell Polinsky, Eric Rasmusen, Susan Rose-Ackerman, Anthony Sebok, Catherine Sharkey, Steven Shavell, Martin Stone, and Ben Zipursky. I also received helpful comments at the 2004 annual meeting of the American Law and Economics Association, and from participants in workshops at Boalt Hall School of Law, University of California, Berkeley; New York University School of Law; Northwestern University School of Law; and Stanford Law School. This research was supported by a grant from the Filomen D'Agostino and Max E. Greenberg Research Fund at the New York University School of Law.

social cost of accidents? Throughout its history, the economic analysis of tort law has also been controversial. The two phenomena are related. It is highly controversial whether tort law should minimize accident costs to the exclusion of fairness concerns, which in turn has fostered the belief that the economic analysis of tort law is controversial.<sup>1</sup>

The controversy associated with the economic analysis of tort law was initially stirred up by the provocative work of Richard Posner. Although he was not the first to apply economic analysis to tort law, Posner strongly influenced the newly developing field by forcefully propounding the claim that tort law should maximize wealth by minimizing accident costs.<sup>2</sup> The approach ultimately foundered as scholars, including Posner, recognized that cost-benefit analysis cannot determine initial entitlements, the basic architecture of any legal rule.<sup>3</sup> The

---

<sup>1</sup> See generally Jules L. Coleman (2003), "The Grounds of Welfare," *Yale Law Journal*, 112, pp. 1511-44 (describing controversy surrounding the economic analysis of tort law).

<sup>2</sup> E.g., Richard A. Posner (1981), *The Economics of Justice*, Cambridge: Harvard University Press; William M. Landes & Richard A. Posner (1987), *The Economic Structure of Tort Law*, Cambridge: Harvard University Press.

<sup>3</sup> Cost-benefit analysis depends on prices, which in turn depend on the initial allocation of property rights or legal entitlements. See Lewis A. Kornhauser

specification of initial entitlements, and thus the substantive content of any legal rule, depends on normative justification and not economic analysis.

This limitation of economic analysis was subsequently addressed by Louis Kaplow and Steven Shavell, who have constructed a proof showing that a “fair” tort rule can violate the Pareto principle by preventing the adoption of a welfare-maximizing, “unfair” tort rule.<sup>4</sup> By showing how a principle of fairness can prevent such a Pareto improvement, Kaplow and Shavell provide a reason for

---

(1998), “Wealth Maximization,” in Peter Newman ed., *The New Palgrave Dictionary of Economics and the Law*, New York: Stockton Press, vol. 3, pp. 679-83. Posner now agrees that wealth maximization is limited in this manner. *See* Richard A. Posner (1995), “Wealth Maximization and Tort Law: A Philosophical Inquiry,” in David G. Owen ed., *Philosophical Foundations of Tort Law*, Oxford: Oxford University Press, pp. 99-111.

<sup>4</sup> *See* Louis Kaplow & Steven Shavell (1999), “The Conflict Between Notions of Fairness and the Pareto Principle,” *American Law and Economics Review*, 1, pp. 63-77; Louis Kaplow & Steven Shavell (2001), “Any Non-welfarist Method of Policy Assessment Violates the Pareto Principle,” *Journal of Political Economy*, 109, pp. 281-286. Kaplow and Shavell have an analytic definition for “fairness,” which is why I place quotations around the term. *See infra* notes 15--16 and accompanying text.

rejecting a fair tort system in favor of one that maximizes welfare. This reason also provides a justification for the conventional economic analysis of tort law. A welfare-maximizing tort system ordinarily relies on cost-minimizing liability rules, thereby reestablishing the dominant role of economic analysis. *All* issues of concern to the tort system ought to be resolved in the cost-minimizing manner, the general method for maximizing social welfare and wealth.<sup>5</sup>

Not surprisingly, the claim that tort law should be nothing more than an exercise of cost minimization has provoked an equally extreme response from critics. The most forceful critique has come from those who maintain that tort liability is best justified by the principle of corrective justice. This principle is based on an individual right that imposes an obligation or duty on another individual. A duty-holder who violates the correlative right has committed a wrong, creating a duty to repair or correct any wrongful losses suffered by the right-holder. This rights-based principle of justice “rules out the economic analysis of [tort] law.”<sup>6</sup>

---

<sup>5</sup> See Louis Kaplow & Steven Shavell (2002), *Fairness Versus Welfare*, Cambridge: Harvard University Press.

<sup>6</sup> Ernest Weinrib (1995), *The Idea of Private Law*, Cambridge: Harvard University Press, at p. 132.

Such sweeping claims about the irrelevancy of economic analysis must be understood in context. If the appropriate rationale for tort liability is a rights-based principle such as corrective justice, then the justification for a liability rule does not depend on whether it is allocatively efficient. Economic analysis is “ruled out” for being irrelevant to the rights-based justification for tort liability.

Allocative efficiency does not need to be the norm of tort liability in order to make economic analysis relevant. Economic analysis is not limited to issues of allocative efficiency and cost minimization. It is an open question whether a rights-based tort system would employ economic analysis, and if so, how.<sup>7</sup>

---

<sup>7</sup> The issue has been explored, though not systematically. See Robert Cooter (1987), “Torts as the Union of Liberty and Efficiency: An Essay on Causation,” *Chicago-Kent Law Review*, 63, pp. 523-552; Mark Geistfeld (2001), “Economics, Moral Philosophy, and the Positive Analysis of Tort Law,” in Gerald Postema ed., *Philosophy and the Law of Torts*, Cambridge: Cambridge University Press, pp. 250-75; Gary T. Schwartz, “Mixed Theories of Tort Law: Affirming Both Deterrence and Corrective Justice,” *Texas Law Review*, 75, pp. 1801-1834. A similar, though different approach seeks to ascertain the extent to which efficiency and fairness justifications coincide or overlap. See Geistfeld, *supra*, at 265-67; Schwartz, *supra*, at 1815-23.

No doubt, many believe that this question does not merit serious consideration. The conventional economic analysis of tort law asks whether a liability rule would minimize accident costs by deterring accidents in the future. That forward-looking inquiry seems to be utterly irrelevant to the backward-looking normative question: Is compensation in this case warranted because the defendant was responsible for violating the plaintiff's right?

Despite superficial appearances, the idea that economic analysis is incompatible with or irrelevant to a rights-based principle of justice is mistaken. A rights-based torts system can be fully compatible with the relevant requirements of welfare economics, contrary to the understanding one can easily gain from contemporary tort scholarship. The compatibility is not merely formal. Economic analysis is integral to any plausible rights-based tort system.

#### I. Efficiency v. Fairness?

The need for tort law arises because social interactions often create a conflict of individual interests resulting in physical harm. An allocatively efficient tort system mediates these interests in a fundamentally different manner than a rights-based tort system.

Consider a tort rule governing risky interactions between an automobile driver and a pedestrian. The transportation enables the driver to pursue various liberty interests, including economic interests. As an unwanted byproduct of that activity, the driver exposes pedestrians to a risk of bodily injury. A pedestrian is

also acting in furtherance of her liberty interests, including economic interests. In the event of a crash that physically harms the pedestrian, by definition, her interest in physical security has been injured. The pedestrian also suffers emotional harm (pain and suffering) and economic harm (like medical expenses). If the driver were obligated to compensate any of these harms, the monetary damages would be detrimental to her economic interests. Any precautionary obligations that tort law imposes on the driver, such as a duty to drive slowly, are detrimental to her other liberty interests. Similarly, any precautionary obligations that tort law imposes on the pedestrian (no jaywalking) restrict her liberty. The way in which tort law regulates the risky interaction will burden or threaten at least one party's interests: Either the pedestrian's interests in liberty and physical security; the driver's liberty interests, including the economic interest; or the interests of both parties. The appropriate mediation of these conflicting interests is the basic question of policy or fairness that must be addressed by tort law.

Tort law traditionally has given "peculiar importance" to the nature of individual interests.<sup>8</sup> The interests need to be distinguished only if there is some

---

<sup>8</sup> American Law Institute (1965), *Restatement (Second) of Torts*, St. Paul: American Law Institute Publishers, § 77 comment i. *See also* W. Page Keeton, Dan B. Dobbs, Robert E. Keeton, and David G. Owen (1984), *Prosser and Keeton on the Law of Torts*, 5th edition, St. Paul: West Publishing, § 3, at 16-17

reason for prioritizing among them, and tort law does so. Most importantly, tort law gives one's interest in physical security priority over the conflicting liberty interest of another.<sup>9</sup>

Having prioritized the two types of interests, tort law must then specify the nature of the priority. An absolute or lexical priority of the pedestrian's security interest would justify tort rules that eliminate any risk of physical injury, effectively requiring the cessation of driving and negation of the driver's (absolutely subordinate) liberty interest in most circumstances. That outcome has been rejected by the tort system. As courts have long recognized, "Most of the

---

(observing that "weighing the interests [of security and liberty] is by no means peculiar to the law of torts, but it has been carried to its greatest lengths and has received its most general conscious recognition in this field"). Throughout the analysis, I will use rather simplistic notions of the relevant interests, such as "liberty" and "security" interests. The philosophical explication of these interests is much more nuanced. *See* Stephen Perry (2003), "Harm, History, and Counterfactuals," 40 *San Diego Law Review*, pp. 1283-1314 (differentiating core interests from secondary or recursive interests).

<sup>9</sup> *E.g.* Keeton et al., *supra* note 8, at 132 ("the law has always placed a higher value upon human safety than upon mere rights in property").

rights of property, as well as of person, are not absolute but relative.”<sup>10</sup> The right to physical security is relative to the right of liberty, giving the security interest a relative interpersonal priority over a conflicting liberty interest. Unlike an absolute priority, a relative priority allows for a tradeoff of the conflicting interests, yielding liability rules that permit automobile driving while requiring drivers to act in conformance with the relative priority of the pedestrian’s security interest.

Merely identifying a relative priority of the security interest over a conflicting liberty interest does not determine how the interests ought to be balanced. This issue has not been clearly resolved by tort law, creating ample room for disagreement. A relative interpersonal priority of the security interest over the liberty interest is consistent with both an allocatively efficient tort rule and a rights-based tort rule.

The economic analysis of tort law distinguishes between security and liberty interests for a fundamental reason. Costs depend on prices, which in turn depend on the initial specification of entitlements. Consistently with the priority of the security interest, economic analysis assumes that the holder of the

---

<sup>10</sup> *Lossee v. Buchanan* 51 N.Y. 476, 485 (1873).

entitlement is the party facing a threat to her physical security, such as a pedestrian who is interacting with an automobile driver.<sup>11</sup>

Given the set of initial entitlements, the conventional economic analysis of tort law gives no further priority to the security interest. Minimizing the social cost of accidents depends on the probability of injury, the cost of injury, the cost of safety precautions, and administrative expenses. Consequently, an individual's interest in physical security must be burdened if doing so would decrease the social cost of accidents. This feature of a cost-minimizing tort system sharply distinguishes it from a rights-based tort system.

Rights-based theories of tort law, including those based on the principle of corrective justice, protect morally fundamental individual interests from incurring burdens justified solely on grounds of social expediency, such as the pursuit of social welfare via the minimization of accident costs. In order for individuals to have a right to physical security, the security interest must have priority over the competing liberty and economic interests of someone else. The right-holder's physical security cannot be compromised merely because doing so would confer

---

<sup>11</sup> See Jennifer H. Arlen (1990), "Reconsidering Efficient Tort Rules for Personal Injury: The Case of Single Activity Accidents," *William and Mary Law Review*, 32, pp. 41-104, at 43 n.9 (providing citations to law-and-economic analyses based on such an entitlement).

greater wealth or welfare on others. As Stephen Perry describes the position, “At least within nonconsequentialist moral theory, it makes sense to think of this [security] interest as morally fundamental, and hence as falling outside the purview of distributive justice; our physical persons belong to us from the outset, and are accordingly not subject to a social distribution of any kind.”<sup>12</sup>

The security interest has this moral attribute for reasons of personal autonomy or self-determination. As Perry elaborates: “The main reason that personal injury constitutes harm [that may require redress as a matter of corrective justice] is that it interferes with personal autonomy. It interferes, that is to say, with the set of opportunities and options from which one is able to choose what to do in one’s life.”<sup>13</sup>

---

<sup>12</sup> Stephen R. Perry (2000), “On the Relationship Between Corrective Justice and Distributive Justice,” in Jeremy Horder ed., *Oxford Essays on Jurisprudence, Fourth Series*, Oxford: Oxford University Press, pp. 237-263.

<sup>13</sup> *Id.* at 256; see also Gregory C. Keating (2001), “A Social Contract Conception of the Law of Accidents,” in Gerald Postema ed., *Philosophy and the Law of Torts*, *supra* note 7, pp. 22-71, at 34 (arguing that under a Kantian conception of reasonableness, our “interest in security is entitled to more protection than our interest in liberty” for risks threatening severe physical injury, because such risks “threaten the premature end, or the severe crippling, of our agency” whereas the

How a liability rule prioritizes the security interest accordingly distinguishes cost-minimizing tort rules from those that protect the individual right to physical security. Once the entitlement is allocated to the security interest, cost-minimizing tort rules then give equal weight to liberty and security interests, unlike rights-based tort rules. “All of the leading justice theorists by now have recognized [that] the aggregate-risk-utility test [which gives equal weight to security and liberty interests] cannot be reconciled with the principles of justice.”<sup>14</sup> For reasons of individual autonomy, rights-based tort rules prioritize the security interest to a greater extent than cost-minimizing rules.

Which priority should tort law adopt? The issue can only be resolved by normative judgment. A tort entitlement can be specified in various ways, including one that permits cost minimization and another that protects the individual right to individual security as a matter of autonomy. The entitlement cannot be determined by economic analysis in the first instance, making the choice of liability rules a normative question.

---

curtailment of liberty has less of a burden on “our capacities to pursue our ends over the course of complete lives”).

<sup>14</sup> Richard W. Wright (2002), “Justice and Reasonable Care in Negligence Law,” *American Journal of Jurisprudence*, 47, pp. 143-196, at 145.

In an effort to guide this normative decision, Louis Kaplow and Steven Shavell have proven that a “fair” tort rule can violate the Pareto principle.<sup>15</sup> For purposes of the proof, a “fair” tort rule gives evaluative weight to some factor that does not exclusively depend on individual welfare, such as rights-based tort rules that prioritize the security interest for reasons of individual autonomy. Since the principle of fairness does not solely depend on welfare considerations, the proof further assumes that the concern for fairness is continuously traded off against some component of welfare. Due to this tradeoff, there will be situations in which the choice of a “fair” tort rule comes at the expense of some positive welfare gain that would be created by an “unfair,” welfare-maximizing rule. If the savings produced by the welfare-maximizing rule could be costlessly redistributed to all members of society, each person would benefit from the adoption of that rule. This Pareto improvement, however, would be barred by the principle requiring the “fair” tort rule. The “fair” rule can make everyone worse off, leading Kaplow and Shavell to conclude that tort rules should only maximize social welfare -- an objective that ordinarily involves the minimization of accident costs.

By assuming that fairness is continuously traded off against some component of welfare, the proof has only limited application. To illustrate, Howard Chang proposes a method for evaluating legal rules that employs a

---

<sup>15</sup> See *supra* notes 4--5 and accompanying text.

variable weight for fairness that depends on welfare considerations.<sup>16</sup> Since fairness has a variable weight with respect to welfare, the concern for fairness does not have to be given *any* weight for cases in which a legal rule would increase the welfare of all individuals. Such a principle would not block the adoption of a Pareto improvement, contrary to the proof of Kaplow and Shavell. Such a principle of fairness is not continuous in any component of welfare as assumed by Kaplow and Shavell -- it ceases to have any weight whenever a legal rule would make everyone better off -- and does not violate the Pareto principle.

In response, Kaplow and Shavell defend the continuity assumption by rejecting the type of fairness principle relied upon by Chang:

[The continuity assumption] is one that we imagined would be endorsed by anyone who believed that a notion of fairness was worth taking seriously.... Formally, our argument only requires that the principle of fairness be continuous *in something*. (Hence, corrective justice should not be given infinitesimal weight with respect to administrative cost savings,

---

<sup>16</sup> Howard Chang (2000), "A Liberal Theory of Social Welfare: Fairness, Utility, and the Pareto Principle," *Yale Law Journal*, 110, pp. 173-235.

trivial aesthetic pleasures, or the consumption of some good -- in other words, to some factor that is unrelated to the notion of fairness.)<sup>17</sup>

Kaplow and Shavell make a compelling point. If the concern for fairness vanishes whenever the cost savings produced by an unfair rule can be distributed so as to make everyone better off, then “no matter how much unfairness is involved, it can be outweighed by the tiniest amount of administrative cost savings [shared per capita].”<sup>18</sup> Any theory that allows the fairness concern to become infinitesimally small under these conditions does not seem to be “worth taking seriously.” Chang’s conception of fairness has been criticized by others. According to the legal philosopher Leo Katz, “[t]he moral precepts that underlie our most basic legal doctrines, or at least those of criminal and tort law, are not like the ‘blended’ fairness theories Chang shows us how to construct by his algorithm.” To avoid the conflict with the Pareto principle, “Chang is driven to construct doctrines that no longer resemble our basic moral ideas.”<sup>19</sup>

---

<sup>17</sup> Louis Kaplow & Steven Shavell (2000), “Notions of Fairness Versus the Pareto Principle: On the Role of Logical Consistency,” *Yale Law Journal*, 110, pp. 237-249, at 243.

<sup>18</sup> *Id.* at 242.

<sup>19</sup> Leo Katz (2006), “Choice, Consent, and Cycling: The Hidden Limitations of Consent,” *Michigan Law Review*, 104, pp. 627-670, at 666.

Chang has shown that there is no necessary conflict between the Pareto principle and rights-based tort rules. It is an open question, however, whether there is a set of plausible rights-based tort rules that satisfy the Pareto principle and the other tenants of welfare economics.

## II. Rights-Based Tort Rules and Welfare Economics

According to justice theorists, the tort right protects individual autonomy, making it necessary to determine how this right protects or promotes autonomy. Under a leading formulation, individual rights are “trumps over some background justification for political decisions that states a goal for the community as a whole.”<sup>20</sup> An individual right, more precisely, places limits or constraints on the reasons that can justify governmental actions such the enforcement of tort rules.<sup>21</sup> When formulated in this manner, the autonomy-based individual right excludes any justification for tort liability that is inconsistent with the concern for autonomy.

---

<sup>20</sup> Ronald N. Dworkin (1984), “Rights as Trumps,” in Jeremy Waldron ed., *Theories of Rights*, Oxford: Oxford University Press, pp. 153-168.

<sup>21</sup> See Jeremy Waldron (2004), “Pildes on Dworkin’s Theory of Rights,” *Journal of Legal Studies*, 29, pp. 301-308 (explaining why this interpretation of Dworkin’s formulation of rights as “trumps” is appropriate).

Within such a rights-based tort system, the concern for autonomy can justify liability rules formulated in terms of a relative priority of the right-holder's security interest over a conflicting liberty interest of the duty-holder. The liability rule must equally respect the autonomy of both the right-holder and duty-holder. Their conflicting interests in security and liberty are each important for purposes of autonomy or self-determination, but the interest in physical security is prior to or more fundamental than the interest in liberty. The relative priority recognizes this difference while permitting some sort of balancing of these interests in contexts where they are conflicting.

Such a relative priority of the security interest can yield a compensatory tort right. If the duty-holder's exercise of autonomy or liberty harms the right-holder's interest in physical security, tort law can burden the duty-holder's subordinate liberty interest with an obligation to compensate the harms suffered by the prioritized security interest of the right-holder. In addition to the ex post damages remedy, compensation can involve ex ante expenditures that make the right-holder "whole" prior to the risky interaction. This duty permits the actor to engage in risky behavior by relying on compensation to protect the security interest of the right-holder, the type of outcome required by an individual right to physical security that is relative to another individual's right to liberty.

As I have argued at length elsewhere, an autonomy-based, compensatory tort right can persuasively explain the important doctrines and practice of tort

law.<sup>22</sup> Having specified the substantive requirements of a set of plausible rights-based tort rules, we can now evaluate this class of rules with the criteria of welfare economics.

A. Rights-Based Tort Rules and the Pareto Principle

A rights-based tort rule protects the individual interest in physical security, thereby ruling out the maximization of social welfare as the only reason for compromising the right-holder's physical security. In this important sense, the individual right constrains social welfare and can yield allocatively inefficient liability rules. The tort right, however, does not constrain social welfare in all possible states of the world. The right protects the individual interest in physical security for reasons of individual autonomy and does not bar the right-holder from exercising her autonomy. The right-holder's exercise of autonomy also promotes her welfare, eliminating any necessary conflict between the tort right and the Pareto principle.

---

<sup>22</sup> See generally Mark A. Geistfeld (forthcoming 2008), *Tort Law: The Essentials*, New York: Aspen Publishers; Mark A. Geistfeld (2006), *Principles of Products Liability*, New York: Foundation Press; Mark Geistfeld (2003), "Negligence, Compensation, and the Coherence of Tort Law," *Georgetown Law Journal*, 91, pp. 585-632.

To see why, we need to consider the circumstances in which the Kaplow--and--Shavell proof operates. The proof assumes a world in which “individuals understand fully how various situations affect their well-being.”<sup>23</sup> The proof also assumes that transaction costs are sufficiently low to allow for any form of mutually advantageous redistribution.<sup>24</sup>

---

<sup>23</sup> Kaplow & Shavell, *Conflict*, *supra* note 4, at 65.

<sup>24</sup> Kaplow and Shavell have two proofs. One involves individuals who are symmetric in all relevant respects, making distributional considerations (and distributional costs) irrelevant. *Id.* The other proof allows for individual differences. For the differences to be meaningful, the welfare gain in moving from (fair) *state-f* to (welfaristic) *state-w* must be unequally distributed across the individuals. Some individuals may be harmed by the move to *state-w*, so *state-w* need not involve a Pareto improvement over *state-f*. Kaplow and Shavell construct a new (redistributed) *state-r* with the same total welfare as *state-w*, in which the total welfare gain in moving from *state-f* to *state-w* is redistributed across all individuals so as to make each one better off in *state-r* than in *state-f*. Each person now prefers *state-r* over *state-f*, so adhering to *state-f* for fairness reasons would violate the Pareto principle. *See* Kaplow & Shavell, *Policy Assessment*, *supra* note 4. Clearly, *state-r* can be compared to *state-f* only if the redistribution of the total welfare gain in moving from *state-f* to *state-w* is costless

Mutually advantageous redistributions can be attained by informed agreements between a right-holder and duty-holder, such as a pedestrian and driver. The tort right protects the pedestrian's interest in physical security, making her the seller for purposes of the exchange. The driver must purchase the right to expose the pedestrian to a risk of physical injury. In the absence of transaction costs, the parties will agree to structure the risky interaction so as to minimize costs and maximize the gains from contracting, yielding the allocatively efficient outcome. This conclusion directly follows from the Coase theorem.<sup>25</sup>

To illustrate, suppose an automobile accident would always kill the pedestrian. Suppose further that the amount of care exercised by the driver is continuous in the probability of accident, so that incrementally greater care incrementally reduces the probability of a fatal accident. Let  $B$  denote the total cost or burden of care incurred by the driver. For any given probability of suffering the fatal injury, the monetary cost of the risk is determined by the pedestrian's willingness to accept money in exchange for facing the risk. This amount makes the pedestrian indifferent between (1) the state of the world in

---

(as in the proof), or more generally, if the per capita welfare cost of redistribution is less than the per capita welfare gain.

<sup>25</sup> See Ronald Coase (1960), "The Problem of Social Cost," *Journal of Law and Economics*, 3, pp. 1-44.

which she does not face the risk and is not compensated, and (2) the state of the world in which she faces the risk and receives compensation. The amount of compensation, which is defined as the willingness-to-accept or WTA risk measure, is the monetary benefit that exactly offsets the cost of the risk or welfare loss for the pedestrian as right-holder. If no monetary benefit could offset the certainty of death, the WTA measure would equal infinity for that particular interaction. As the interaction involves increasingly lower level risks, the WTA measure decreases in magnitude. To face a 1-in-100,000 chance of dying, for example, the individual might be willing to accept around \$60 (roughly the amount of increased wages required by the typical worker to face an occupational hazard of this magnitude).<sup>26</sup> The driver, therefore, can reduce the total WTA payment by reducing the risk. The driver's total cost -- the cost of precaution  $B$  and the WTA payment to the pedestrian -- is minimized if the driver takes precautions costing less than the associated reduction in the WTA measure. This amount of precaution  $B^*$  minimizes accident costs and is allocatively efficient. At the efficient level of care, the pedestrian typically faces a positive probability of being killed in an accident and requires compensation  $WTA^*$  for facing that risk. By definition, the pedestrian's receipt of the  $WTA^*$  compensation equalizes her

---

<sup>26</sup> See U.S. Environmental Protection Agency (2000), *Guidelines for Preparing Economic Analyses*, Washington: U.S. Government Printing Office, at 90.

welfare level as compared to a world in which she does not receive the compensation and does not interact with the driver. The pedestrian is fully compensated before she has been exposed to the risk, absolving the driver of any obligation to pay compensatory damages in the event of injury. The agreement is allocatively efficient and satisfies the Pareto principle according to the First Fundamental Theorem of Welfare Economics.<sup>27</sup>

The compensatory tort right is justified by the concern for individual autonomy, and so the exchange must satisfy this normative principle in order to be enforceable. The individual is not merely trading or waiving the right.<sup>28</sup> She

---

<sup>27</sup> This particular transaction would leave the pedestrian indifferent and only satisfies the weak form of the Pareto principle. To satisfy the strong form, the entitlement would require the duty-holder to share some of the gains of trade with the right-holder. Due to the assumption of costless redistribution, there are no strategic bargaining costs that might otherwise block such a mutually advantageous redistribution. The agreement would still induce the allocatively efficient amount of care and would necessarily satisfy both forms of the Pareto principle.

<sup>28</sup> Compare Allan Gibbard (1974), "A Pareto-Consistent Libertarian Claim, *Journal of Economic Theory*, 388-410 (proving that the Pareto principle is not

*exercises* the compensatory right by agreeing to receive compensation for facing the risk. Any tort rule that blocked such a choice would be contrary to the right, and so an autonomy-based compensatory tort right permits the right-holder to assume the risk in this manner. Consistently with this reasoning, such an exchange would absolve the driver of liability for any damages caused by materialization of the risk under the tort doctrine of express assumption of risk.<sup>29</sup>

This example establishes the existence of a class of plausible, rights-based tort rules that does not violate the Pareto principle, contrary to the claim made by Kaplow and Shavell. They may have proven that all “fair” tort rules can block a Pareto improvement, but their definition of a “fair” tort rule is inapplicable to the rights-based tort rules under consideration.

Recall that the proof defines a “fair” rule as one justified by a normative principle that continuously trades off a concern for fairness against some component of welfare. This type of principle does not justify the rights-based tort rules under consideration, which instead are justified by a normative principle that constrains the tort system from maximizing social welfare at the expense of

---

violated when individuals can trade or waive their rights), *with* Chang, *supra* note 16, at 201-02 (describing critiques of Gibbard’s proof).

<sup>29</sup> American Law Institute (2000), *Restatement of the Law, Torts: Apportionment of Liability*, St. Paul: American Law Institute Publishers, § 2.

individual autonomy. The constraint is not binding when the right-holder exercises the compensatory right by assuming the risk. In these states of the world, fairness (autonomy) is not continuously traded off against welfare. There simply is no tradeoff. These rights-based rules do not satisfy the continuity assumption of the Kaplow--and--Shavell proof, nor do they violate the Pareto principle.

Moreover, this normative principle does not give variable weight to autonomy in some manner that depends upon social welfare, thereby avoiding the problems created by such a principle. As Kaplow and Shavell have argued, this type of principle is problematic because “no matter how much unfairness is involved, it can be outweighed by the tiniest amount of administrative cost savings [shared per capita]” in order to satisfy the Pareto principle.<sup>30</sup> This problem does not exist for the compensatory tort right under consideration. The pedestrian assumes the risk because she receives adequate compensation for doing so. The compensation could be infinitesimally small to assume an infinitesimal risk. The right-holder’s autonomy is not being compromised to promote social welfare, and so the constraint imposed by the individual right is not binding. In these circumstances, autonomy is not given infinitesimal weight with respect to a

---

<sup>30</sup> Kaplow & Shavell, *Consistency*, *supra* note 17, at 242.

penny or any factor unrelated to the individual right, the type of problem generated by a decision rule that gives variable weight to justice or fairness.

The duty-holder's behavior does not affect this reasoning. A rights-based liability rule is interested in the defendant's behavior only insofar as it affects the plaintiff's tort right.<sup>31</sup> If the plaintiff exercises her compensatory right by accepting a penny from the defendant, the defendant's behavior is irrelevant. There is no great unfairness that can be outweighed by the one penny that induced the consent. The right-holder's well-informed, voluntary choice satisfies the concern for autonomy, eliminating the rights-based constraint that would otherwise govern the duty-holder's behavior.

#### C. The Pareto Principle and the Choice of Tort Rules

Although a compensatory tort right does not violate the Pareto principle under the conditions governing the Kaplow--and--Shavell proof, such a right might still conflict with the Pareto principle. Consider a case in which the rights-based tort rule could be replaced by a cost-minimizing tort rule in a manner that would increase the welfare of each person. Even though the change could be implemented with the consent of each right-holder, suppose that the government instead wants to unilaterally impose the change. Implementing the policy change in this manner would disrespect individual autonomy and could be barred by the

---

<sup>31</sup> See, e.g., Weinrib, *supra* note 6, at 155.

principle of fairness, although one would need a more fully specified theory of governmental action to reach that conclusion. Assuming that the principle of fairness would bar implementation of the policy in this manner, does it follow that the Pareto principle provides a reason for rejecting these rights-based tort rules?

The answer depends on the reason why we find the Pareto principle to be normatively appealing. The relevance of the Pareto principle is determined by the social welfare function, and so the normative significance of a Pareto violation must derive from the normative rationale for the social welfare function.

To see why, suppose that the Pareto principle is satisfied by any policy change that would increase the welfare of each person, regardless of whether the affected individuals consent or otherwise have their autonomy impaired. This specification makes the Pareto principle a welfarist criterion that evaluates social policy exclusively in terms of total welfare, regardless of its source.<sup>32</sup> When policies are evaluated exclusively in welfarist terms, the social welfare function does not have to distribute the welfare gains of a policy change in some manner

---

<sup>32</sup> See Amartya Sen (1982), "On Weights and Measures: Informational Constraints in Social Welfare Analysis," in *Choice, Welfare and Measurement*, Cambridge: Harvard University Press, pp. 226-263, at 248-51 (defining "welfarism" as the "general approach of making no use of any information about the social states other than that of the personal welfares generated in them").

that makes each person better off. The Pareto principle no longer has any independent normative significance, nor does its violation.

For example, suppose there are 100 individuals in a community that is considering two tort rules. *Rule-1* would make each person in the community better off by one unit of welfare, satisfying the Pareto principle. *Rule-2* would make 99 people better off by 1.10 units of welfare, while making one person worse off by 8 units of welfare. Suppose the social welfare function is utilitarian (a form of welfarism), so that the social planner gives equal weight to each individual's welfare. The planner will choose *Rule-2*, which has a total welfare gain of 100.9 units, exceeding the welfare gain of 100 units under *Rule-1*. The fact that *Rule-1* would make everyone better off is irrelevant to the utilitarian planner, establishing the normative irrelevance of the Pareto principle within a welfarist society.

As a formal matter, a utilitarian social welfare function does not violate the Pareto principle. The Pareto principle requires a pair-wise comparison of the status quo with a proposed change. The principle does not apply to a comparison of *Rule-1* and *Rule-2* when evaluated from the perspective of the status quo, as in the example above. The pair-wise restriction of the Pareto principle makes it formally consistent with welfarism. Any Pareto improvement from the status quo, like the adoption of *Rule-1*, necessarily increases total welfare and satisfies the requirements of utilitarianism in particular and welfarism in general.

The consistency between utilitarianism and the Pareto principle is only formal, however, leaving the Pareto principle without any independent normative content. An exclusive focus on total utility makes it irrelevant whether the policy change would make each person better off. The Pareto principle merely identifies one set of circumstances in which the policy change would increase social utility. Other measures have this same attribute, such as the average increase in individual utility. Like the Pareto principle, each of these measures is otherwise normatively insignificant. For a utilitarian social welfare function, the only normative question is whether total utility would be increased by the policy change.

If the Pareto principle has no independent normative significance, then it is not relevant for evaluating tort rules. In the circumstances under consideration, a principle of justice blocks a Pareto improvement. The only violation that would occur, though, is with respect to utilitarianism itself. The autonomy-based tort right prevents the government from implementing a policy that compromises the right-holder's autonomy merely to increase social utility. The rights-based tort rule is functioning exactly as intended. Whether the right should block a policy that increases total utility is a hard normative question that depends on the respective merits of autonomy and utilitarianism, not the Pareto principle.

By contrast, the Pareto principle can have normative appeal based on unanimous consent. When a policy change would make everyone better off and

each individual agrees to the change for that reason, the policy simultaneously promotes individual autonomy and social welfare.<sup>33</sup> When justified in this manner, the Pareto principle requires consent, eliminating any potential conflict between the Pareto principle and autonomy-based tort rights.

Indeed, the Pareto principle does not need to be justified by autonomy in order for it to require actual consent. Even if the social welfare function is utilitarian or otherwise depends only on total welfare and not its source, all affected individuals may still have to agree to a policy change in order for it to satisfy the Pareto principle. Welfare commonly refers to “individuals’ actual well-being rather than to individuals’ well-being as reflected in their mistaken preferences.”<sup>34</sup> For this measure of welfare, the government’s unilateral implementation of a policy could increase an individual’s welfare only if the individual knows that this is the reason why her welfare has been increased. Anyone who disagreed with the unilateral nature of the change would not prefer that policy, in which case the policy change would not satisfy the Pareto principle.

---

<sup>33</sup> Compare Richard A. Posner (1980), “The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication,” *Hofstra Law Review*, 8, pp. 487-508 (identifying the autonomy rationale for the Pareto principle).

<sup>34</sup> Kaplow and Shavell, *Conflict*, *supra* note 4, at 65 & n.2 (adopting this measure).

Each (fully informed) individual would better off only if each one actually agrees with the change. Actual consent satisfies the autonomy-based principle of fairness, eliminating the possibility of *any* conflict between the Pareto principle and autonomy-based tort rules.<sup>35</sup>

Upon scrutiny, the Pareto principle provides no reason for selecting welfare-maximizing tort rules. Within a welfarist system, the Pareto principle has no independent normative significance, nor does its violation. Insofar as the normative appeal of the Pareto principle stems from unanimous consent and the associated exercise of individual autonomy, it provides support for rights-based tort rules and not welfare-maximizing rules.

This conclusion does not prove that rights-based tort rules satisfy the requirements of welfare economics. To do so, rights-based rules must also satisfy the efficiency-equity criterion.

#### D. The Efficiency-Equity Criterion

Any rights-based tort rule is a transfer mechanism between the right-holder and duty-holder. Under the efficiency-equity criterion, a transfer mechanism is economically optimal if it is the least costly method for satisfying a

---

<sup>35</sup> See Heidi M. Hurd (1996), "The Moral Magic of Consent," *Legal Theory*, 2, pp. 121-146 (discussing importance of consent for the exercise of autonomy).

distributional need. This criterion minimizes the loss of allocative efficiency for any given distributive or equitable objective.

To determine whether rights-based tort rules satisfy the efficiency-equity criterion, we need to specify the desired distributional or equitable outcome. What is the principle of distributive justice that determines the appropriate distribution of wealth and welfare across society as a whole? Once again, the issue of whether a tort rule satisfies a criterion of welfare economics depends on the social welfare function.

To see why, consider a principle of distributive justice patterned on some simple formula like “to each in equal shares.” To implement this principle, the tax system could determine the wealth of each individual in the community, much like it determines individual income, and then redistribute via individualized taxes and transfers to equalize wealth across the community. As a complement to the tax system, the tort system would minimize accidents costs, thereby increasing social wealth and the total amount to be distributed by the tax system. When used in this manner, a cost-minimizing tort system can probably attain the desired distributive objective at less cost than a rights-based tort system.<sup>36</sup> For this type of

---

<sup>36</sup> See Louis Kaplow & Steven Shavell (2000), “Should Legal Rules Favor the Poor? Clarifying the Role of Legal Rules and the Income Tax in Redistributing Income,” *Journal of Legal Studies*, 29, pp. 821-835.

distributive principle, the efficiency-equity criterion favors cost-minimizing tort rules over rights-based tort rules.

Rights-based rules have this property only because the principle of distributive justice is not compatible with the individual right to physical security. When the principle of distributive justice exclusively depends on the total amount of individual wealth or welfare, such as “to each in equal shares,” all that matters is the fact of inequality. The source or reason for the inequality is irrelevant. Everyone is entitled to the same distribution, regardless of their behavior or any other reason for the inequality. The distributive entitlement is not affected by inequalities generated by rights-violations, eliminating any reason to incur the allocative inefficiencies created by a rights-based tort system.

Other principles of distributive justice depend on the source of inequality, justifying distributive outcomes that do not solely depend on differences in individual wealth or welfare. The basic idea is that once everyone has the same, just starting point, each can pursue her conception of the good life. Different pursuits typically generate different levels of individual wealth or welfare, and so only certain types of inequalities should be eliminated by redistribution. As Thomas Nagel puts it, “The essence of this moral conception is equality of *treatment* rather than impartial concern for well-being. It applies to inequalities

generated by the social system, rather than to inequalities in general.”<sup>37</sup> To use Ronald Dworkin’s terminology, allowing for inequalities based on choice means that a distributive principle should be “endowment-insensitive” and “ambition-sensitive.”<sup>38</sup> One’s position in life should reflect ambitions and choices rather than the arbitrary circumstances of endowment beyond one’s control. For this class of distributive principles, “Treating people with equal concern requires that people pay for the costs of their own choices.”<sup>39</sup>

When operating within this class of distributive principles, cost-minimizing tort rules no longer satisfy the efficiency-equity criterion. Rights-based tort rules attain the desired overall distributive outcome at lowest cost, thereby satisfying this criterion of welfare economics.

Consider the following distribution of wealth that is deemed to be fair because the inequalities stem from individual choices and not endowments.

---

<sup>37</sup> Thomas Nagel (1991), *Equality and Partiality*, New York: Oxford University Press. Nagel identifies five sources of inequality that can be morally distinguished: discrimination; class; talent; effort; and luck. *Id.* at 103.

<sup>38</sup> Ronald Dworkin (1981), “What is Equality? Part 2: Equality of Resources,” *Philosophy and Public Affairs*, 10, pp. 283-345, at 311.

<sup>39</sup> Will Kymlicka (1990), *Contemporary Political Philosophy: An Introduction*, Oxford: Clarendon Press, at 75.

**Fair Pre-Accident Distribution of Wealth**

<u>Brad</u>	<u>Others</u>	<u>Peter</u>
\$2 million	\$200,000	\$110,000

Suppose that Peter negligently injures Brad while driving, causing Brad \$50,000 of damages. Without a tort system, the accident would result in the following distribution of wealth:

**Actual Post-Accident Distribution of Wealth**

<u>Brad</u>	<u>Others</u>	<u>Peter</u>
\$1.95 million	\$200,000	\$110,000

The \$50,000 reduction in Brad's wealth occurs only because he had the misfortune of being injured in the crash. But what if that injury is Peter's responsibility, because Peter's exercise of autonomy violated Brad's right to physical security? In that event, the principle of fairness would deem Peter to be the "owner" of the injury costs, making him responsible for the loss suffered by Brad.<sup>40</sup> Peter would incur a compensatory duty to Brad for the losses caused by the infringement of Brad's right. This compensatory obligation is not retributive

---

<sup>40</sup> Compare Jules L. Coleman & Arthur Ripstein (1995), "Mischief and Misfortune," *McGill Law Review*, 41, pp. 91-130 (arguing that the ownership of accident costs is a normative question).

and can be satisfied by consensual arrangements like insurance contracts.<sup>41</sup>

Assuming that Peter has no insurance, the compensatory duty he owes to Brad would require the following distribution of wealth:

**Fair Post-Accident Distribution of Wealth**

<u>Brad</u>	<u>Others</u>	<u>Peter</u>
\$2 million	\$200,000	\$60,000

The movement from the actual post-accident distribution of wealth to the fair distribution requires a transfer of \$50,000 from Peter to Brad. To implement this transfer, all that matters is the risky interaction between Peter and Brad; the wealth held by Others is irrelevant. Peter and Brad are the two parties to the tort suit. By enforcing the rights-based tort rule, the tort system would determine that Peter violated a duty owed to Brad, giving Brad the right to receive \$50,000 from Peter as compensation for the injury. *A rights-based tort rule defines the appropriate transfer rule.*

---

<sup>41</sup> “Corrective justice goes to the nature of the obligation; it does not prescribe the mechanism by which the obligation is discharged.... Nothing about corrective justice precludes the defendant from anticipating the possibility of liability by investing in liability insurance.” Weinrib, *Private Law*, *supra* note 6, at 135-36 n.25

Under these conditions, it makes no sense to separate the tort inquiry from the appropriate transfer inquiry, the type of separation that would otherwise occur if tort rules were designed to minimize accident costs. A tort regime that first determined liability on grounds of cost minimization would then require the tax system to make a separate, costly inquiry regarding the appropriate tax redistribution between Peter and Brad. That tax transfer would yield the same outcome which could have been attained more directly by the rights-based tort rule requiring a transfer of \$50,000 from Peter to Brad. The separate tort inquiry on cost minimization would create no social benefit, because the parties would ignore that rule and instead make their decisions by reference to the final tax-transfer rule.<sup>42</sup> The tort inquiry concerning cost minimization would be

---

<sup>42</sup> The problem can be modeled as an extensive game in which the first stage involves care decisions; the second stage involves the risky interaction; the third stage involves enforcement of the cost-minimizing tort rule; and the final stage involves the tax transfers. The concept of subgame perfect Nash equilibrium requires a strategy that is Nash equilibrium for the entire game and for every subgame (played at each stage to the end). This concept of rationality requires each actor to consider the decision at each stage by reference to the final stage. Each actor makes the care decisions in stage one by reference to the final stage involving the tax transfers. In effect, each actor “sees through” the intermediate

unnecessary and wasteful. To reduce the total costs of attaining the desired distributive outcome, the tort system could directly implement the appropriate transfer rule based on Peter's violation of Brad's right. Rights-based tort rules according satisfy the efficiency-equity criterion whenever they operate within a broader system of distributive justice that depends on the source of one's wealth or welfare -- the type of system that presumably is highly attractive to economists.

### III. Economic Analysis in a Rights-Based Tort System

It should come as no surprise that autonomy-based tort rules satisfy the distributional requirements of welfare economics, since the promotion of autonomy is consistent with the important value judgments of contemporary welfare economics. "Put most simply, to be autonomous is to be one's own person, to be directed by considerations, desires, conditions, and characteristics that are not simply imposed externally upon one, but are part of what can somehow be considered one's authentic self."<sup>43</sup> Individual choice, of course, also has foundational importance for welfare economics. In addition to the Pareto

---

stage involving the cost-minimizing tort rule and instead considers the care decision in terms of the ultimate tax transfers.

<sup>43</sup> John Christman (2003), "Autonomy in Moral and Political Philosophy," in Edward N. Zalta ed., *The Stanford Encyclopedia of Philosophy*, available online at <http://plato.stanford.edu/archives/fall2003/entries/autonomy-moral/>.

principle, the “main value judgment” involved in modern welfare economics “is called *individualism*” which maintains that “social ordering ought to be based on individual orderings of alternative states, that is, on individual preferences, where it is implicitly assumed that each individual is the best judge of his or her own preferences.”<sup>44</sup> Like autonomy, individualism rests on the normative judgment that the individual is the best person for deciding how to pursue her own life. By promoting autonomy, rights-based tort rules recognize the value of individualism embraced by welfare economics.

To be sure, the normative concern for autonomy is not ordinarily justified as a means for satisfying preferences and increasing welfare. But as Jules Coleman has persuasively argued, the concern for autonomy ultimately explains why we care about welfare:

Of course, any plausible theory of what is valuable to a person would include the ability to act on the basis of one’s preferences and desires. But that is because autonomous action is valuable to persons understood as planning agents who bear a special

---

<sup>44</sup> Robin Boadway & Neil Bruce (1984), *Welfare Economics*, New York: Basil Blackwell Publishers, at 2.

relationship of ownership and responsibility to how their life goes, and not because people have a taste for welfare.<sup>45</sup>

Due to the inherent relationship between autonomy and individual welfare, the best protection of autonomy often will involve protecting the right-holder's welfare with damages compensation and risk reduction. Consequently, a rights-based tort system will use economic analysis to formulate the substantive content of liability rules, even for a tort right that is justified exclusively by the intrinsic value of autonomy and not the welfare or any other consequence produced by the exercise of autonomy.

Consider the rights-based theory of Ernest Weinrib, who is perhaps the most resolute nonconsequentialist theorist of tort law. He argues that the tort "right is not synonymous with welfare, nor wrong with the deprivation of it."<sup>46</sup>

---

<sup>45</sup> Coleman, *Grounds of Welfare*, *supra* note 1, at 1542. *See also* Ronald M. Dworkin (1980), "Is Wealth a Value?," *Journal of Legal Studies*, 9, pp. 191-226 (showing that the maximization of social wealth can only matter insofar as it promotes some other independent normative value).

<sup>46</sup> Weinrib, *Private Law*, *supra* note 6, at 131.

“The reason that rights matter for tort law lies elsewhere.”<sup>47</sup> Although the tort right is not justified by any concern for welfare, Weinrib also recognizes that welfare serves a critical “secondary function of concretizing rights and making them quantifiable in particular cases.”<sup>48</sup> In order for welfare considerations to play this functional role, the tort inquiry must rely on economic analysis.

Consider once again the tort rule governing risky interactions between drivers and pedestrians. Due to nonconsensual nature of the interaction, tort law must first ensure that the behavior adequately respects individual autonomy. Tort law does so by objectively valuing the interests in question. Within contemporary society, automobile driving is almost essential for the exercise of autonomy, and so the tort rule cannot ban the activity merely because it might injure pedestrians. Such a ban would violate the requirement that the fair tort rule must equally respect the autonomy of the right-holder and duty-holder. Since the fair tort rule must permit the activity despite the risk that pedestrians will be physically injured, the best protection of the pedestrian’s autonomy must reside in protecting her welfare. A liability rule that adequately protects the right-holder’s welfare

---

<sup>47</sup> Ernest J. Weinrib (2001), “Correlativity, Personality, and the Emerging Consensus on Corrective Justice,” *Theoretical Inquiries in Law* (Online Edition), vol. 2, at <http://www.bepress.com/til/default/Vol2/iss1/art4Weinrib>, p. 14.

<sup>48</sup> *Id.*

must also equally respect the welfare of the duty-holder. The fairness inquiry, therefore, must formulate the negligence rule in a manner that gives equal consideration to the welfare levels of the right-holder and duty-holder, an inquiry requiring economic analysis.

A fair resolution of this problem is difficult for reasons made apparent by economic analysis. Recall that under ideal compensatory conditions, the driver incurs total tort obligations equal to the burden of precautions  $B^*$  and the compensatory payment to the pedestrian for facing the residual risk captured by the  $WTA^*$  measure. The compensatory payment of the  $WTA^*$  measure can take the form of a damages payment for the injury caused by the risk.<sup>49</sup> That form of

---

<sup>49</sup> Consider an injury does not alter the pedestrian's utility function when the risk of injury is 1-in-100,000 and the pedestrian has a WTA risk measure of \$60. The WTA measure includes the cost of risk aversion, making the pedestrian risk neutral with respect to any decision concerning her receipt of the WTA measure. Assuming that the injury does not alter her marginal utility of wealth, the pedestrian would be indifferent between a tort rule giving her a guaranteed receipt of the \$60 WTA compensatory proceeds prior to each risky interaction and a tort rule giving her damages of \$6,000,000 in the uncertain event of injury (the mathematical expectation of the uncertain damages award,  $(1/100,000) \cdot \$6,000,000$ , equals the \$60 certainty provided by the WTA proceeds). The right-

compensation is not available in the context under consideration, since the accident would kill the pedestrian. Unless the pedestrian as right-holder is fairly compensated for the risky interaction, however, the benefits and burdens of the risky activity cannot be fairly distributed between the right-holder and duty-holder as required by the tort right. This compensatory problem is starkly posed by nonconsensual risks threatening fatal injury, although a significant problem also exists for any nonconsensual risk threatening severe physical injury.<sup>50</sup>

This compensatory problem can be ameliorated by the standard of care. Since the driver cannot pay the WTA\* amount to the pedestrian in the form of tort damages for a fatal accident, the negligence standard of care can instead require the driver to make the WTA\* payment in the form of safety precautions. A negligence standard requiring the driver to take precautions costing ( $B^* + WTA^*$ )

---

holder, therefore, can receive the WTA compensation by a damages remedy equal to the WTA measure multiplied by the reciprocal of the risk of injury ( $\$60 \cdot 100,000$ ).

<sup>50</sup> Like premature death, severe bodily injuries can reduce the victim's marginal utility of wealth -- a comatose victim being an extreme example -- and so the right-holder would prefer to receive the WTA risk proceeds prior to the risky interaction rather than being provided with a damages remedy formulated in terms of the WTA measure.

imposes the same total burden on the driver as she would incur under ideal compensatory conditions. As compared to the allocatively efficient standard of care  $B^*$ , the more demanding standard ( $B^* + WTA^*$ ) reduces risk.<sup>51</sup> The risk reduction directly protects the security interest and increases the welfare of the pedestrian by making it less likely that she will be seriously injured or killed. The increased welfare for the right-holder *partially* offsets the compensatory shortfall created by the inherent inadequacy of monetary damages in cases of premature death and serious bodily harm, a second-best compensatory outcome reflective of the nonideal compensatory conditions in which the rights-based rule must operate.<sup>52</sup>

---

<sup>51</sup> One cannot choose to be negligent in exchange for paying the “price” of compensatory damages. A duty-holder who acts in this fashion is subject to punitive damages and criminal liability, creating the necessary incentive for complying with the demanding standard of reasonable care. *See* Mark A. Geistfeld (2008), “Punitive Damages, Retribution, and Due Process,” *Southern California Law Review*, 81, pp. 263-309.

<sup>52</sup> The pedestrian is still worse off as compared to the ideal compensatory outcome, whereas the driver’s welfare is equal in the two states of the world. As a matter of equality, each party may have to suffer an equal welfare loss relative to their welfare level under ideal compensatory conditions. Such a solution will still

When the nature of the relationship precludes the duty-holder from otherwise compensating the right-holder with other forms of ex ante compensation, and the nature of the injury makes it prohibitively costly or impossible for the duty-holder to fully compensate the right-holder ex post, then risk reduction is the only way to protect the right-holder's interest in physical security. These deterrence considerations apply correlatively to the right-holder and duty-holder, satisfying this essential requirement of corrective justice. A concern for deterrence characterizes the economic analysis of tort law, and so the importance of deterrence within a rights-based tort system further establishes the importance of economic analysis within such a system.

By "quantifying" or "concretizing" the tort right in welfare terms, economic analysis also produces well-defined liability rules. The prior example shows how the standard of care for a rights-based negligence rule can be specified with the same degree of precision as the cost-minimizing rule. In a rights-based tort system, the appropriate amount of monetary damages for nonmonetary

---

be second best. The driver must be permitted to engage in the risky activity, and so the pedestrian will necessarily face some risk of fatal injury for which she cannot receive compensation, either ex ante or ex post.

injuries can also be derived by economic methodology.<sup>53</sup> Overly vague tort rules create fundamental problems of fairness for duty-holders and litigants, and so any plausible rights-based tort system will use economic analysis to make the liability rules more determinate.

Indeed, the tort right is best protected by the allocatively efficient liability rule for important classes of cases, including products liability, medical malpractice, and bilateral risky interactions in which each party is simultaneously a potential injurer and victim to the same extent (like two automobile drivers). Due to the distributive nature of these interactions, the right-holder internalizes the costs and benefits of tort liability. The consumer as right-holder, for example, pays (via higher product prices) for the safety investments and injury compensation that tort law requires of the product seller as duty-holder. The internalization of costs and benefits creates an *intrapersonal* conflict of the right-holder's interests in security and liberty, and so the *interpersonal* priority of the security interest no longer governs. These safety decisions instead depend on the right-holder's willingness to pay to reduce the risk, justifying liability rules that

---

<sup>53</sup> The method is described in *supra* note 49. For explanation of why that method is an appropriate way to redress the violation of a tort right, see Mark A. Geistfeld (2006), "Due Process and the Determination of Pain and Suffering Tort Damages," *DePaul Law Review*, 55, pp. 331-358.

minimize accident costs. By identifying how tort rules affect the distribution of welfare between right-holders and duty-holders, economic analysis shows why a rights-based tort system should formulate liability rules with cost-benefit analysis for important classes of cases.<sup>54</sup>

Just as economic analysis must be guided by a normative principle in the initial specification of legal entitlements and the ultimate specification of the social welfare function, the normative principle also depends on economic analysis at the stage of implementation. This symbiotic relationship has been almost entirely ignored in the ongoing debate about the appropriate purpose of tort law, resulting in the mistaken impression that tort law requires either a rights-based inquiry that excludes economic analysis, or an economic inquiry that excludes any concern for corrective justice or the fair redress of individual rights-violations. In addition to satisfying the distributional criteria of welfare economic, a rights-based tort system will importantly depend on economic analysis. The two modes of analysis are complements and not substitutes.

---

<sup>54</sup> See generally Geistfeld, *Tort Law*, *supra* note 22; Geistfeld, *Products Liability*, *supra* note 22.