OFFSETTING RISKS

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Under prevailing tort law, an injurer who must choose between Course of Action A, which creates a risk of 500 (there is a probability of .1 that a harm of 5000 will result), and Course of Action B, which creates a risk of 400 (there is a probability of .1 that a harm of 4000 will result), and who negligently opts for the former will be held liable for the entire harm of 5000 that materializes. This full liability forces the injurer to pay damages that are five times higher than would be necessary to internalize the risk of 100 that his negligent choice actually creates. This Article argues that tort law should recognize the Offsetting Risks Principle, under which courts would take into account the risks decreased by the wrongdoing as a mitigating liability factor. The injurer in our example would thus be liable for only 1000, which is twenty percent of the harm that actually materialized. This outcome not only differs from the result under prevailing tort law but also diverges from that mandated by a probabilistic recovery principle. Under that principle, if, in our example, the risks of both Course of Actions A and B relate to the same victim, the injurer should be liable for 4600.

The failure of tort law to cause injurers to internalize the actual risks created by their negligence, as illustrated by the example above, emanates from the law's disregard for the positive externalities generated by wrongdoings. In our example, the injurer's negligent choice creates two opposite effects: one negative (increasing risks by 500) and one positive (decreasing risks by 400). Because the law imposes liability for the negative effects when harm materializes but ignores the positive effects, the result is that the injurer bears liability for risks that far exceed the actual risks he negligently created.

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The Offsetting Risks Principle is suitable mainly for those cases in which the injurer must balance the various conflicting interests of his potential victim. It also applies to cases where the injurer must balance the interests of the victim against the interests of third parties or society as a whole. This Article focuses on the Offsetting Risks Principle's potential application in medical malpractice cases. Adopting the Offsetting Risks Principle in such cases and reducing liability in accordance with offsetting risks would result in a huge—and desirable—decrease in the damages awarded in medical malpractice suits. Doctors would then pay for no more than the social harm actually generated by their negligence, practice less defensive medicine, and refrain from overinvesting in precaution. But patients are the main beneficiaries: they would pay less for medical services and receive improved care in return. The apparent problem of undercompensation for patients could, and should, be solved outside the framework of tort law, either by social insurance or by private insurance.

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Introduction

Tort law mandates that injurers bear liability for the harm caused by their negligence. In conventional law and economics theory, this liability threatens the potential injurer with the expected harm resulting from his negligence in order to provide him with an efficient incentive to take precau-

tions. Liability for either less or more than the harm inflicted by the injurer leads to underdeterrence or overdeterrence, respectively, and results in inefficient levels of precautions.[1] Corrective justice theories also justify imposing liability on a negligent injurer for the harm he causes, based on the notion that the wrongdoer should rectify the injustice created by his wrongdoing by way of compensation.[2] Thus, prevailing tort law's mandate of compensation is consistent with both efficiency and corrective justice considerations.

Negligence law is built around the paradigmatic case where the injurer's precautions reduce the expected harm to potential victims and generate no adverse effects, either for the victim or for third parties. In this case, both efficiency and corrective justice considerations support liability for the entire harm. In many instances, however, this paradigm does not apply. Frequently, precautions reduce expected harm of one type at the expense of increasing expected harm of another type, either to the victim or to someone else. An injurer who fails to take these precautions creates a net risk equal to the difference between the risks he negligently failed to reduce and the risks he would have created had he taken the necessary precautions. I call the latter risks offsetting risks. Although courts take into account such offsetting risks when they set the standard of care, they ignore these offsetting risks when awarding damages.[3] Corrective justice principles support the current approach, while efficiency principles challenge it. Example 1 below illustrates the presence of offsetting risks.

> **Example 1: Doctor and Patient.** A doctor must decide what treatment to pursue for his patient: Treatment A or Treatment B.[4] Each treatment creates different risks but produces the same utility if the risks are not realized. This utility is much greater than the risks involved. Treatment A entails a risk to the patient's left arm of 500 (there is a probability of .1 that the treatment will produce a harm of 5000), and Treatment B entails a risk to patient's right arm of 400 (there is a probability of .1 that the treatment will produce a harm of 4000). The risks of Treatments A and B are not correlated: the realization of the risk from one treatment has no bearing on the probability of the realization of the risk from the other treatment. The doctor negligently chooses Treatment A, and a harm of 5000 materializes. Should the negligent doctor's liability be 5000, or should it be a different amount?[5]

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1. *See infra* Part IV.

2. ERNEST J. WEINRIB, THE IDEA OF PRIVATE LAW 3–21 (1995).

3. In other cases, courts wrongly ignore the injurer's self-risk when they set the standard of care. Robert Cooter & Ariel Porat, *Does Risk to Oneself Increase the Care Owed to Others? Law and Economics in Conflict*, 29 J. LEGAL STUD. 19 (2000). This mistake was corrected in a recent draft of the Third Restatement. *See* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL HARM § 3 cmt. b (Proposed Final Draft No. 1, 2005).

4. Note that one of the treatments could be an omission, such as not operating on the patient or not administering a certain medicine.

5. For actual cases illustrated by Example 1, see *Hutchinson v. United States*, 915 F.2d 560 (9th Cir. 1990), where a doctor chose one asthma drug over a more conservative drug with lesser

Under prevailing tort law, the doctor's liability in Example 1 would amount to 5000. The potentially negligent doctor bears a liability risk of 500 (.1 x 5000) if he makes the wrong choice. Yet the net risk the doctor creates when he does make a wrong choice is only 100 (500–400).

In a sharp departure from prevailing tort law, this Article argues that the extent of the injurer's liability in cases such as Example 1 above should be determined not only by the harm suffered by the victim but also in light of the risks reduced by the injurer's wrongdoing. Specifically, the damage award should be reduced to reflect the true social cost of the injurer's negligent behavior. I refer to this as the Offsetting Risks Principle ("ORP"). In Example 1, this principle would require that the court award only 1000 in damages, not 5000. Liability in the former amount would set a liability risk of 100 (.1 x 1000), which equals the net risk that the doctor would create with a wrong choice. This outcome not only differs from the result under prevailing tort law but also diverges from that mandated by a probabilistic recovery principle. Under that principle, the injurer in Example 1 should be liable for 4600 (5000 - .1 x 4000).[6]

The failure of prevailing tort law to cause the doctor to internalize the *net* risk created by his negligent choice emanates from its disregard for the positive externalities that the wrongdoing may generate. The doctor's negligent choice in Example 1 creates two opposite effects: one negative (increasing risks by 500) and one positive (decreasing risks by 400). Since the law imposes liability for the negative effects when harm materializes but ignores the positive effects, the doctor bears liability for risks that are much higher than the net risks he negligently created.

Failing to take into account the offsetting risks makes the injurer liable for risks that not only exceed the risks created by his *negligence* but, more importantly, risks that are higher than the risks created by his *activity*. Thus, in Example 1, liability for 5000 would impose on the doctor liability for a risk five times greater than the risk he actually created. Such excessive liability results in overdeterrence, which is especially destructive in fields where offsetting risks are common and lawsuits frequent. Medicine is particularly illustrative. In the medical field, as this Article will demonstrate, courts' failure to consider offsetting risks as a mitigating liability factor contributes to the flourishing practice of defensive medicine and overinvestment in precautions, both of which are detrimental to patients.[7]

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side effects, and *Taylor v. Rajani*, No. 256058, 2005 Mich. App. LEXIS 2607 (Mich. Ct. App. Oct. 25, 2005), where a doctor chose surgery over the less invasive procedure of biopsy.

6. *See infra* Part III.

7. For the sake of simplicity, this Article does not discuss cases in which the difference between the two courses of action emanates not from their risks but from their different expected utility. For example, let us assume that in Example 1, the risks accompanying the two courses of action are identical, but there is a difference of 100 between their respective expected utilities. Presumably, if the doctor were to choose the course of action with the lower expected utility, he would be considered negligent and his liability would be set to reflect the difference between the two expected utilities. Under this approach, the doctor's expected liability should be 100. Similarly, Jennifer Arlen and W. Bentley MacLeod have argued that a physician's liability should amount to the difference between the patient's expected benefit from the optimal treatment and her actual

The principal objective of this Article is to illuminate the significance of offsetting risks in setting tort liability and to identify the distortions produced when courts systematically ignore these risks. The Article proceeds to propose a means of correcting these distortions and suggests that legislatures—guided by the actual harm caused to the plaintiff, the risk that was realized into harm, and the magnitude of the offsetting risks—should offer courts a menu of damages from which they can choose. Part I introduces the Offsetting Risks Principle and sets its parameters. Part II applies the ORP to various cases, including those in which the offsetting risks relate to third parties or to society at large. Part III discusses the relationship between the ORP and the probabilistic recovery principle. Part IV elaborates on the drawbacks of excessive liability when offsetting risks are ignored. Part V addresses some criticisms of and objections to considering offsetting risks. The Article concludes by proposing a means by which courts might apply the ORP.

I. Introducing the Offsetting Risks Principle

Often, a wrongdoer's act both harms and benefits his victim. Courts regularly take both these effects into account and award damages to the victim in the amount of the difference between the two. In implementing this rule, commonly known as the "offsetting benefits rule,"[8] courts are adhering to the *restitutio ad integrum* principle, under which tort liability should restore the victim to the position she would have occupied had she not been harmed by the wrongdoer. At the same time, the offsetting benefits rule makes the wrongdoer liable for the net, rather than gross, harm he created, as required under both efficiency and corrective justice theories.

Similarly, when the wrongdoer inflicts harm on someone and it can be proven that, had the wrong not been committed, the victim would have suffered some other harm, the wrongdoer is liable for the difference between the two harms and not for the entire harm that actually materialized.[9] To illustrate this last point, let us modify Example 1 so that there is a probability of 1 that Treatment A will cause a harm of 5000 and that Treatment B will cause a harm of 4000. Clearly, if the doctor chooses Treatment A, which then results in a harm of 5000, he will be liable to the patient for 1000 and not 5000. This is a simple application of the factual causation test, known as the but-for test, under which a harm is causally related to an act if that harm would not have materialized but for the act in question.[10]

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benefit from the erroneous treatment that she received. Assuming underenforcement, that difference should be divided by the probability that the doctor is found liable when negligent. *See* Jennifer Arlen & W. Bentley MacLeod, *Malpractice Liability for Physicians and Managed Care Organizations*, 78 N.Y.U. L. Rev. 1929, 1984–85 (2003).

8. This rule has some exceptions, the most important and prevalent of which precludes the deduction of insurance benefits from damages. For the rule and its exceptions, see 1 Dan B. Dobbs, Law of Remedies § 3.8, at 372–79 (2d ed. 1993).

9. H.L.A. Hart & Tony Honoré, Causation in the Law 249–53 (2d ed. 1985).

10. *See id.* at 109–29.

Yet in the original version of Example 1, the court would award damages of 5000 under prevailing tort law, five times higher than what would be necessary in order for the doctor to internalize the true risk produced by his wrong choice. The question, then, is whether there is any substantive difference between Example 1 and its modified version, where the probability of the occurrence of the harm increases from .1 to 1. From an efficiency perspective, the two cases should produce identical outcomes, with liability set at 1000 in both. Prevailing tort law works otherwise. In Example 1, the doctor's negligence causes harm in the amount of 5000: "but for" his negligence, the doctor would have chosen Treatment B, which, in ninety percent of the cases, would have resulted in no harm to the patient. Therefore, by simple application of the burden of proof requirement, the court should ignore the ten percent probability that Treatment B would have produced harm of 4000 and award damages for the entire harm actually suffered by the patient.

To understand the problematic nature of tort law's treatment of the scenario presented in Example 1, let us imagine that the scenario is repeated ten times in a row. In all ten cases, the doctor negligently chooses Treatment A over Treatment B. On average, the total harm caused by these ten wrong choices is 1000: in one out of the ten cases, the doctor *inflicts* on one of his patients harm of 5000, but in another one out of the same ten cases, he *saves* a patient from harm of 4000. Yet prevailing tort law will impose liability for the harm of 5000 *suffered* by the one patient and will give no credit for the harm of 4000 from which the other patient was *saved*. Thus the law causes the doctor to internalize the negative effects of his negligence but, at the same time, externalizes its positive effects. As a consequence, the doctor is held liable for damages in an amount that is five times higher than the actual harm he negligently caused.

Corrective justice theories offer a plausible response to this quandary: each tort case should be considered separately as a discrete interaction. Any grouping together of similar cases as suggested above would be inconsistent with the fundamental notions of tort law.[11] Rather than directly addressing this critical argument, I will demonstrate in the paragraphs to follow that the courts take into account as mitigating liability factors not only harms that would have been inflicted but for the wrongdoing in question, but also some of the risks that would have been created but for that wrongdoing. These risks are not of the same type as the offsetting risks illustrated in Example 1, but it is hard to find a normatively sound argument to explain why the former risks should be considered a mitigating factor while the latter are completely ignored.

Example 2 below, although similar to Example 1, has one important variation: whereas in Example 1 each treatment entails completely different risks (nonoverlapping risks), in Example 2 the risks entailed by Treatment A include the risks of Treatment B (overlapping risks) as well as an additional, separate risk.

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11. *See* WEINRIB, *supra* note 2, at 63–66.

> **Example 2: Doctor and Patient—Overlapping Risks.** A doctor must decide what treatment to pursue for his patient: Treatment A or Treatment B. Each treatment entails different risks but produces the same utility if the risks are not realized. This utility is much greater than the risks involved. Treatment A entails a risk to five of the patient's fingers of 500 (there is a probability of .1 that the treatment will produce a harm of 5000), and Treatment B entails a risk to the patient's first four fingers in the amount of 400 (there is a probability of .1 that the treatment will produce a harm of 4000). The risks of Treatments A and B are not correlated: the realization of the risk from one treatment has no bearing on the probability of the realization of the risk from the other treatment. The doctor negligently chooses Treatment A, and a harm of 5000 materializes. Should the negligent doctor's liability be 5000, or should it be a different amount?[12]

If we apply prevailing tort law logic to Example 2 and ignore the offsetting risks, the outcome should be identical to Example 1. The doctor is liable for 5000 for the following reason: the doctor's negligence caused the patient a harm of 5000. If the doctor had behaved reasonably and chosen Treatment B, the probability that the patient would not have suffered any harm would have been .9 (recall that the risks of A and B are not correlated). Therefore, the court should presumably ignore the low probability that, but for the doctor's negligence, a harm of 4000 would have materialized.

Yet tort law would in fact respond differently to Example 2. Causation principles mandate that liability be imposed only for the fifth finger that was negligently exposed to risk and not for the other four fingers that would have been exposed to the same risk during either treatment. The fact that all five fingers would very likely have been saved had the doctor chosen to administer Treatment B is considered completely irrelevant in setting liability. The reason for this is that under prevailing tort law, the fact that the wrongdoing in question was a but-for cause of the harm is not sufficient to establish a causal relationship between the act and the harm that actually materialized. Rather, the wrongdoing must also satisfy the causal link condition: its recurrence must increase the chances that the injury will occur.[13] One illustration of this condition is the case of a driver traveling at speeds above the posted limit who crosses a bridge that collapses for reasons unrelated to the speeding. A passenger in the car who is harmed in the accident brings a tort suit against the driver. It is obvious that the driver will not be found liable, irrespective of his negligent driving. Even though the driver's negligence is a but-for cause of the harm (had he been driving more slowly, he would not have reached the bridge when it collapsed, and the passenger would have suffered no harm), it does not satisfy the causal link condition:

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12. Similarly, in the case of *Steele v. Ft. Sanders Anesthesia Group*, 897 S.W.2d 270, 273 (Tenn. Ct. App. 1994), operating on a patient while he was seated added the risk of ischemic injury to the regular risks of anesthesia and thus the risk of quadriplegia to the normal risk of partial paralysis. As I explain in the text that follows, had the regular risks been realized, liability under prevailing tort law should not have been imposed.

13. Guido Calabresi, *Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69, 71 (1975).

speeding per se does not increase the risk of being harmed by collapsing bridges.[14]

In Example 2, the negligent choice of the doctor did not increase the risk to the first four fingers, only to the fifth finger. The choice can thus be characterized as a cause only with respect to the harm of 1000 that occurred to the fifth finger. Liability for the harm of 1000 makes a lot of sense: the doctor in no way created a risk of 500 when he wrongly chose Treatment A over Treatment B. He created a risk of only 100, and liability of 1000 would ensure he internalized no less, *but also no more*, than the true risk his negligence created.[15]

The same rationale applies to Example 1. Like the doctor in Example 2, the doctor in Example 1 by no means created a risk of 500 when he wrongly chose Treatment A over Treatment B. Moreover, no more than a risk of 100 can be attributed to his act, wrongful or not, because even absent any act on the part of the doctor, the patient would have been exposed to a risk of at least 400. The fact that the risks of the two courses of treatment overlap in Example 2 but do not in Example 1 should not change the outcome. In both cases there is a risk of 400 unrelated to the doctor's negligence or even to his actions, and he should not be held responsible for the realization of that unrelated risk.

While Examples 1 and 2 represent pure nonoverlapping risks and pure overlapping risks, respectively, there are scenarios that fall between these two extremes to which the ORP should be applied as well. This is the case when the risks associated with the negligent and nonnegligent choices relate to the same object, say, the patient's right arm, but either the magnitude of the harm if the risks are realized or the probability of the harm materializing

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14. *Cf.* HART & HONORÈ, *supra* note 9, at 121–22 (discussing when speeding is causally connected to an accident). Similarly, in a case where a tree fell on a car as it was speeding, the Supreme Court of Pennsylvania held that the causal relationship between the accident and the defendant's speeding was insufficient for the imposition of liability:

> That his speed brought him to the place of the accident at the moment of the accident was the merest chance, and a thing which no foresight could have predicted. The same thing might as readily have happened to a car running slowly, or it might have been that a high speed alone would have carried him beyond the tree to a place of safety.

Berry v. Sugar Notch Borough, 43 A. 240, 240 (Pa. 1899).

15. In a decision rendered by the British House of Lords, *Chester v. Afshar*, [2004] UKHL 41, [2005] 1 A.C. 134 (appeal taken from Eng.), the majority of the Lords decided to depart from established causation principles. The plaintiff had undergone an operation that had failed and resulted in harm. *Id.* at [11], 1 A.C. at 142. She could not prove that the doctors had been negligent in executing the operation. *Id.* The plaintiff was able to prove, however, that she had not been fully warned of the risks of the operation by her doctors, and so her consent could not be deemed informed. *Id.* at [5], 1 A.C. at 140. To establish the doctors' liability for her injury, it was necessary for the plaintiff to show that but for the lack of due warning, the harm would not have occurred. *Id.* at [29], 1 A.C. at 147. The Court held for the plaintiff, reasoning that the plaintiff would have asked for a second opinion had she been adequately warned by her doctors. *Id.* at [11], 1 A.C. at 142. The second opinion would have recommended the same operation, but it would have delayed the procedure by a few days, at which point the plaintiff would have probably undergone the operation without suffering any harm. *Id.* The minority, in holding for the defendants, reasoned that the lack of due warning had not increased the risks to the plaintiff, even though it had constituted a but-for cause of the harm. *Id.* at [7]-[10], 1 A.C. at 141–42.

vary between the two choices. To illustrate, suppose that Treatment A creates a risk of 500 (there is a probability of .1 that a harm of 5000 to the right arm will materialize), while Treatment B creates a risk of 400 (there is a probability of .08 that the same harm will materialize). The ORP mandates that if the doctor negligently chooses Treatment A and a harm of 5000 materializes, liability should be in the amount of 1000—not 5000. A liability of 1000 is the extent of the liability necessary for the doctor to internalize the net risk of 100 that he created with his negligent choice of Treatment A.

When there is no correlation between the risks associated with each choice, however, courts will impose liability for the entire harm sustained by the patient. I suspect that courts base such decisions on the fact that but for the doctor's negligent choice, it was more likely than not that the patient would have suffered no harm whatsoever. More precisely, the probability that he would have suffered harm is only .08 and therefore can be ignored.[16]

To sum up, when the same wrongful act that increased the risk that eventually was realized (r_A) reduced another risk (r_B), liability (L) should be equal to the harm that materialized (h_A) multiplied by the difference between the two risks (r_A–r_B) and divided by the risk that was realized. This can be expressed in the following formula:

$$L = h_A \frac{r_A - r_B}{r_A}.$$[17]

If we apply this formula to Example 1, the doctor would have to bear liability only in the amount of 1000 for the harm created by his negligent act:

$$L = 5000 \times (500 - 400) / 500$$

Note that either r_A or r_B could be the result of omission. Also note that when the injurer could have chosen among more than two options, r_B should

16. The outcome under prevailing tort law would be different, however, if we were to assume instead that the risks entailed by the treatments are correlated. Ruling out the noncorrelation assumption would yield the following threefold factual argument: (a) Treatment A would harm 10 out of 100 patients exposed to this course of treatment, (b) Treatment B would harm 8 out of 100 patients exposed to the treatment, and, most importantly, (c) the same 8 people who would have suffered harm under Treatment B would have suffered identically under Treatment A. Under this argument, the probability that the doctor's negligent choice caused the patient's harm is only twenty percent. Courts applying a preponderance of the evidence standard would dismiss the action against the doctor, while courts applying the probabilistic recovery principle would award damages for only twenty percent of the patient's harm.

17. A different way to present the same idea is as follows:

$$L = h_A \frac{p_A h_A - p_B h_B}{p_A h_A} = h_A \left(1 - \frac{p_B h_B}{p_A h_A}\right)$$

Here L denotes liability, h_A denotes the harm that materialized from r_A, p_A denotes the ex ante probability that r_A will be realized into h_A, h_B denotes the harm that could have materialized from r_B, and p_B denotes the ex ante probability that r_B would have been realized into h_B.

be the risk entailed by the most reasonable option among the various alternatives available to the injurer.

II. The Offsetting Risks Principle in Action

As noted, in many instances increasing one risk to the victim entails decreasing another risk to her. Example 1 above is representative of this scenario. In other instances, however, an increase in the risk to the victim brings with it a decrease in risks to third parties or to society in general. The ORP is applicable in all these categories of cases: the negligent injurer who failed to decrease a risk that eventually was realized into a harm should be held liable only for the fraction of the harm that reflects the net risk created by the wrongdoing. The net risk is the difference between the risk that was increased and the risk that was decreased by the same act or omission.[18]

This Part will discuss these categories of cases as they are manifested in the case law. In these categories, the injurer, ex ante, must balance one set of the victim's interests either against another set of her interests, against third-party interests, or against societal interests.[19] In all three categories, the negligent failure to secure the victim's interests, which in turn materialized into a harm to the victim, is accompanied by a decrease in the risk to others' interests. To the best of my knowledge, the ORP was not adopted—or even raised—in any of the following cases.

A. *The Different Interests of the Victim*

Example 1 illustrates the first category of cases, where the injurer must balance conflicting interests of the victim. On the one hand, the patient has an interest in the bodily integrity of her left arm, and on the other hand, she has a similar interest in her right arm. Securing one interest will always be at the expense of the other. At the same time, failing to secure one interest, even negligently, necessarily decreases the risk to the other. The risk created by the negligent doctor who made the wrong choice of treatment is therefore the difference between the risk added to the left arm and the risk eliminated from the right arm.

This first category encompass more than medical malpractice cases, even though offsetting risks are common in that field.[20] Lawyers, accountants, and other professionals are often required to balance their clients' conflicting interests. Sometimes they, too, must choose the course of action

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18. *Cf.* Stephen Marks, *Discontinuities, Causation, and Grady's Uncertainty Theorem*, 23 J. Legal Stud. 287, 288 (1994) ("Increasing the precaution level not only lowers the expected cost of accidents but also changes the types of accidents that occur and changes the identities of those at risk.") Marks makes this point to criticize one of Grady's arguments with respect to the optimal negligence rule, but does not take it further to propose the adoption of the ORP.

19. *Cf.* Ariel Porat, *The Many Faces of Negligence*, 4 Theoretical Inquiries L. 105 (2003) (presenting the various categories of such instances and arguing that the necessity of imposing liability varies among the categories).

20. For examples of actual cases, see *supra* note 5.

that is least risky for their client, and their negligent failure to properly balance any conflicting interests could result in harm. Again, if the same negligence that increased one risk also decreased a separate risk,[21] then both risks should be taken into account by courts when awarding damages.

The conflicting interests of a victim are also implicated when a health authority decides to vaccinate the entire population against a certain disease. Vaccinating a specific individual could be negligent if that individual's risk from the vaccine's side effects is higher than the risk of contracting the disease if not vaccinated. Still, the decision to vaccinate that individual, while negligently increasing the risk of side effects, decreases the risk of contracting the disease. Applying the ORP would result in lowering the damages awarded for the materialized harm of the side effects.[22]

Lastly, consider a rescuer who negligently attempts a rescue and inflicts harm upon the victim being rescued. For instance, a layman rescuer who administers first aid to the victim of a road accident leaves the latter with bodily injury that would not have occurred had the victim received professional medical treatment only.[23] It is possible that the rescuer will be considered negligent, because he should have waited for a medical team to arrive and refrained from providing first aid. At the same time, it is possible that, when the rescuer provided first aid treatment, there was a certain risk that a medical team would not arrive on time and the victim's state would deteriorate even further. Even though the rescuer, given the different risks involved, is considered negligent, he should not be liable for the entire harm suffered by the victim. Instead, he should be liable only for the fraction of the harm that reflects the difference between the risk created and the risk avoided by the negligent rescue attempt.[24]

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21. *See, e.g.*, McMahon v. Shea, 688 A.2d 1179, 1182 (Pa. 1997) (affirming lower court ruling upholding plaintiff's cause of action for malpractice where an attorney advised his client to settle but failed to explain the consequences of settling); Saetz v. Braun, 116 N.W.2d 628, 632–34 (N.D. 1962) (finding a livestock carrier who chose to cross an unsafe bridge instead of taking a steeper and longer route negligent and liable for the full amount of harm).

22. At this stage, I ignore the third-party benefits of universal inoculation enjoyed by the majority of the inoculated population who do not suffer from the vaccine's side effects. *Cf.* Jonathan Baron & Ilana Ritov, *Intuitions about Penalties and Compensation in the Context of Tort Law*, 7 J. RISK & UNCERTAINTY 17, 18 (1993) (arguing that high liability for harms resulting from vaccines and birth-control devices produces negative incentives to develop them, even though they are beneficial to society). These benefits are third-party offsetting risks. *See infra* Section II.B.

23. *Cf.* Hebert v. Perkins, 260 So. 2d 15 (La. Ct. App. 1972) (imposing liability for injuries sustained by his sick passenger on a driver who drove through a red light and collided with another car while rushing that sick passenger to the hospital.) Needless to say, no offsetting risks were taken into account in the decision. *See* Baron & Ritov, *supra* note 22, at 18.

24. Every state has adopted a Good Samaritan statute that reduces the standard of care for "licensed health care providers when they are rendering certain professional assistance at the scene of an emergency accruing outside the professional's regular practice." DAN B. DOBBS, THE LAW OF TORTS, §252, at 663 (2000). Some states also extend the statute to any person who renders emergency assistance. *See id.* at 664. The ORP could serve as a possible mean to reduce liability in such cases at the damages—rather than at the standard of care—level.

B. *The Victim's Interests versus Third-Party Interests*

Example 3 below illustrates the application of the ORP when the negligent infliction of harm on the victim entails a decrease in risks to others.

> **Example 3: The Ambulance Driver.** An ambulance driver hits a pedestrian with his ambulance while rushing a wounded passenger to the hospital, causing the pedestrian bodily injury of 5000. Had the driver slowed down by twenty miles per hour, the accident would have been prevented and the risk to pedestrians and other people using the road would have decreased by 500. At the same time, slowing down also would have increased the risk to the wounded passenger by 400. For how much should the driver be held liable?[25]

Prevailing negligence law mandates that the driver in Example 3 be held liable for 5000, which would cause him to internalize a risk of 500 when rushing his passenger to the hospital, even though the net risk he created was only 100. Conversely, the ORP requires that liability be imposed for only 1000.

Sometimes, the negligent act decreases risks to nonspecific third parties. In one such case, a driver negligently drove too slowly on the highway and caused an accident.[26] Driving faster at a reasonable speed would have decreased the risk of an accident caused by driving too slowly but, at the same time, would have increased the risk of an accident caused by driving more quickly. The ORP would require that the liability of the slow driver reflect the difference between the risk increased and the risk decreased by negligently driving at a reduced speed. In an analogous example, consider a safety device for a car that decreases the risk of accidents of one type while unreasonably increasing the risk of accidents of another type. Both risks are not necessarily borne by the buyer of the car and could also affect third parties.[27] In this scenario, the ORP also mandates reducing the manufacturer's liability in accordance with the risks reduced to others.

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25. *Cf. Hebert*, 260 So. 2d at 17. In *Hebert*, the court also imposed liability on the rescuing driver for injuries sustained by the driver of the vehicle with which the rescuing driver collided. No offsetting risks were considered in this context either.

26. Von Bergen v. Kuykendall, 400 P.2d 553, 554-56 (Or. 1965) (imposing liability on the slow driver for the full harm inflicted on the victim). A similar example is the negligent failure of the state to maintain safety on the highway by lighting flares. *See* Whitehouse Trucking Co. *ex rel.* Hanover Fire Ins. Co. v. State, 22 Ill. Ct. Cl. 126, 135 (Ct. Cl. 1955). Lighting flares is known to be hazardous. *See* Ott v. Washington Gas Light Co., 205 F. Supp. 815, 817 (D.D.C. 1962) (describing how a small child was burned by the open flame of a flare pot set out in the street to warn of a barricade protecting an excavation).

27. *Cf.* Caterpillar Tractor Co. v. Beck, 593 P.2d 871 (Alaska 1979) (holding that, in order to avoid liability for its defective design, a tractor manufacturer should prove by a preponderance of the evidence that, on balance, the benefits of the challenged design outweighed the risk of danger inherent in the design); Green v. Smith & Nephew AHP, Inc., 617 N.W.2d 881 (Wis. Ct. App. 2000) (finding a manufacturer of latex gloves liable for an allergic reaction triggered by exposure to the cornstarch powder with which it lined its gloves but giving no consideration to the possible benefits of the addition of cornstarch powder). Another noteworthy case in this context is that of an automobile bumper manufacturer who designed a higher bumper, making it safer for the driver of the car to which it is attached but more dangerous for other drivers on the road. Beatty v. Trailmaster Prod.,

This second category of cases also includes professionals who must balance the interests of their clients against the interests of third parties. In *Tarasoff v. Regents of the University of California*,[28] the police briefly detained a patient who, upon information from his therapist, had intended to murder his ex-girlfriend, but the police eventually released the patient because he appeared to be of sound mind. Neither the police nor the therapist notified the ex-girlfriend of the danger, and eventually she was murdered by the patient. The California Supreme Court recognized that tort liability could be imposed on the therapist for his failure to exercise reasonable care to protect the victim by warning her of the danger posed by the patient.[29] It further ruled that, in these circumstances, such a warning would not be considered a breach of medical confidentiality and remanded the case for further proceedings. Had the trial court applied the ORP, it should have deducted from damages an amount representing the risk to the patient's mental health that could have been created had the therapist warned the victim. Furthermore, under the ORP, the trial court also could have reduced damages even further by taking into account the societal interest in medical confidentiality that would have been adversely impacted had the therapist warned the victim. The next Section will expand upon this question of whether damages should be reduced when a negligent act simultaneously diminishes a risk to the interests of society at large.

A similar set of facts emerged in *Cooley v. Public Service Co*.[30] In this case, a telephone company subscriber sued the telephone company for the nervous shock he had suffered due to a loud, sudden noise that had emanated from his phone cables and interrupted his phone conversation. It appeared that had the telephone company taken certain precautions to reduce the risk of this occurrence to its subscribers, the risk of electrocution to bystanders would have increased. The court dismissed the suit, emphasizing the importance of protecting bystanders even at the expense of protecting subscribers. Alternatively, the court could have applied the ORP and, while still imposing liability on the telephone company, reduced damages commensurate with the decrease in the risk to bystanders.[31]

Inc., 625 A.2d 1005 (Md. 1993) (holding that the mere fact that the truck's bumper was higher than that of the decedent's car did not render the truck defective or unreasonably dangerous).

28. 551 P.2d 334 (Cal. 1976).

29. An analogous example is the negligent release of a mental patient who poses a threat to his family. *See, e.g.*, Durflinger v. Artiles, 563 F. Supp. 322 (D. Kan. 1981), *aff'd*, 727 F.2d 888 (10th Cir. 1984).

30. 10 A.2d 673 (N.H. 1940).

31. In a third case, decided by the House of Lords, the police were not held liable for their failure to hold a person in custody who, after his release, murdered the plaintiffs' relative. The Lords ruled that the police owed no duty of care in the circumstances under discussion. Hill v. Chief Constable, [1989] A.C. 53 (H.L.) (appeal taken from Eng.). Had the Court imposed liability and applied the ORP, the liability would have been reduced due to the fact that by releasing the alleged murderer, the police had eliminated the risk of holding an innocent person in custody.

In yet another case, the House of Lords ruled that a public authority operating a liberal rehabilitation camp with less supervision than commonly practiced owed a duty of care to people injured by inmates who had escaped from custody. Home Office v. Dorset Yacht Co., [1970] A.C. 1004 (H.L.) (appeal taken from Eng.). Here, too, imposition of liability and application of the ORP would

Applying the ORP to this second category of cases could be expected to meet with greater resistance than its application in the first category of cases. In fact, even when harming the victim prevents *certain* harm to a third party, courts tend to impose liability for the entire harm and not allow a deduction for the prevented harm. As demonstrated in Part I, the rationale for such a deduction is quite obvious when the harm caused and the *certain* harm prevented (or benefit obtained) accrue to the same person. In such cases, the factual causation test as well as the offsetting benefit rule mandate imposing liability for the net, rather than gross, harm incurred. That rationale does not apply when harming the victim prevented harm to a third party. To illustrate, assume that in Example 1, instead of increasing one risk and decreasing another risk to the same patient, the doctor negligently caused a certain harm of 5000 to Patient A instead of causing a certain harm of 4000 to Patient B. To concretize this scenario, assume that the doctor admitted both Patients A and B to the emergency room, but because he was the only doctor available, he could treat only one patient at a time. Each patient would have suffered certain harm without immediate treatment. The doctor negligently chose to treat Patient B first rather than Patient A. As a result, Patient A suffered a harm of 5000, but Patient B, due to the doctor's negligent choice, was saved from a harm of 4000.[32]

Even though the negligent doctor created a net harm of only 1000, under prevailing tort law he would be obliged to compensate Patient A for 5000 and would not receive any credit for the harm he prevented to Patient B. Because this is the tort law approach to deducting *certain* harm that is prevented, it follows that prevented *risks* do not affect injurers' scope of liability either. Tort law's disregard for the harm—as well as the risks—prevented to third parties is rooted in the principle of compensation on the one hand and the law's approach towards positive externalities on the other. These rationales create the sharp divide between the first and second categories of cases when it comes to applying the ORP.

The principle of compensation, which is strongly supported by corrective justice, is the central explanation for why injurers should pay damages to their victims and not to the state—for why we need tort law in addition to criminal law.[33] Allowing harms or risks prevented to third parties to affect the amount of damages awarded to victims would undermine the goal of compensation. Conversely, reducing damages due to the prevention of *certain* harm to the *victim* is a natural reaction on the part of the court, which is

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have resulted in a reduction of damages due to prevention of the harm, or risk of harm, the inmates would have suffered had they been held in a less liberal rehabilitation camp.

32. An analogous example is that of a dam operator who fails to balance the interests of landowners along the lake created by the dam and landowners below the dam. *See, e.g.*, Trout Brook Co. v. Willow River Power Co., 267 N.W. 302, 306 (Wis. 1936); Boyington v. Squires, 37 N.W. 227 (Wis. 1888); Hackstack v. Keshena Improvement Co., 29 N.W. 240 (Wis. 1886). None of these cases imposed liability on the dam operator.

33. Another explanation is that recognizing the entitlement of victims to compensation (as opposed to the state) provides them with an incentive to bring actions and enforce the law against transgressors. Absent such entitlement, victims would lack incentive to report the harms they suffer. *See* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW § 6.10, at 192 (6th ed. 2003).

required to award damages for the actual harm suffered by the victim. Admittedly, the justification for reducing damages due to *risks*—rather than certain harm—is less obvious, but, as explained in Part I, a rather compelling analogy exists between harms and risks.

The second reason why tort law ignores harms or risks prevented to third parties is a product of its approach to positive externalities. Subject to a few recognized exceptions, when a person confers uninvited benefits on another person, she is generally not entitled to any payment for those benefits. *An efficiency-oriented justification* for this general rule is that it encourages consensual, as opposed to coerced, transactions among parties.[34] Analogously, a wrongdoer who creates benefits for a third party by reducing the latter's risk of harm should not expect to reap anything from anyone for those conferred benefits—not from the third party (who is typically unidentified) and certainly not from the victim who received no benefits whatsoever. Arguably, from a *moral perspective* as well, it makes no sense that the victim of the wrongdoing would have to pay—in the form of reduction in damages—for benefits to third parties that were obtained due to unreasonably exposing *the victim* to a risk of harm. How could one convincingly argue that Patient A, who suffered a harm of 5000 in the last variation of Example 1, be awarded damages only in the amount of 1000 simply because Patient B benefited from the doctor's wrongdoing toward Patient A?

To be sure, the rationale for reducing damages to victims in the first category of cases is also rooted in the positive externalities created by the wrongdoing. The reason the patient in the original variation of Example 1 should receive damages of 1000 is not that she received a benefit of 4000 that should be deducted from her harm of 5000. In fact, in Example 1, the reason for applying the ORP is because the doctor's wrongdoing sometimes culminates in saving unidentified patients from a harm of 4000. Thus, as explained earlier, in ten similar cases, one patient suffers a harm of 5000 but another patient (who is *probably* not the victim who suffered the harm of 5000) is saved from a harm of 4000. This is the reason for applying the ORP to Example 1 and for reducing the victim's damages from 5000 to 1000. Still, there is a very pronounced distinction between the first category of cases and the second category, which makes the application of the ORP much more appealing in the former. In the first category of cases, and in Example 1 in particular, the *same* person—our victim—who was exposed to an ex ante, unreasonable risk of 500 is also the person who received an ex ante benefit from the same wrongdoing, in terms of reducing another risk to her by 400. The victim does not enjoy such a benefit in the second category of cases, because the ex ante—as well as the ex post—beneficiary of the wrongdoing is a third party. For this reason, it can be convincingly argued that 80% of the risk *to the victim* that is realized in Example 1 (400 out of 500) is not the result of the doctor's wrongdoing, and his liability for the materialized harm should be set accordingly. Such an argument does not

34. Saul Levmore, *Explaining Restitution*, 71 VA. L. REV. 65, 68–82 (1985).

apply to the second category of cases, where 100% of the risk *to the victim* that is realized into the ultimate harm is the result of the wrongdoing.

A possible response to the *efficiency-oriented argument* against applying the ORP to this second category of cases is that for these cases, the concern that consensual transactions between injurers and third parties will be discouraged is irrelevant. As long as the goal is efficiency and not compensation, the wrongdoer should be charged in the exact amount of the social costs of his wrongdoing, and those costs consist of both harms and benefits (that is, harms done and harms prevented), either to the victim or to third parties.[35]

A related argument against applying the ORP to the second category of cases is based on the transaction costs of dealing with third-party effects in general, whether negative or positive. It is often the case that a wrongdoer creates harms for which no one can sue him and benefits for which he cannot sue. The law imposes liability for the major harms created and ignores the rest, because the transaction costs of dealing with small harms are prohibitively high. For the same reason, tort law also ignores positive effects such as offsetting risks. A possible response to this argument is that the third-party effects ignored by tort law are typically minimal and random, whereas in the context under discussion, the prevented harms or risks are typically substantial, systemic, and central to defining the true social cost of the wrongdoing.

In sum, tort law does not recognize harms or risks prevented to third parties as a mitigating factor in awarding damages. This approach is strongly supported by the goal of compensation, which is associated with corrective justice, but violates the principle that the wrongdoer should internalize the *true* social costs of his wrongdoing, an efficiency-based principle that many believe to be the foundation of tort law.

C. *The Victim's Interests versus Societal Interests*

The ORP is also applicable to cases where the injurer must balance the victim's interests against societal interests, even when the latter cannot be assigned to any specific individual.

> **Example 4: The Hike.** A tour guide leads a group of hikers through the Judean Desert and must choose one of two paths: Path A, which crosses territory where hikers are likely to cause harm to the landscape and environment, or Path B, which passes through territory where that particular harm is not a real risk but where a dangerous trail awaits the hikers instead.

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35. *Cf.* Abraham Bell & Gideon Parchomovsky, *Givings*, 111 YALE L.J. 547, 554 (2001) ("[T]he efficiency rationale for takings compensation also dictates that the state properly measure the benefits of its actions. Just as the state's failure to internalize the cost of takings creates fiscal illusion and inefficiency, the state's failure to internalize the benefit of givings creates fiscal illusion and inefficiency."). *See also* Robert Cooter & Ariel Porat, *Should Courts Deduct Nonlegal Sanctions from Damages?*, 30 J. LEGAL STUD. 401 (2001) (arguing that when a breach of contract or a wrongdoing triggers nonlegal sanctions that confer benefits on third parties, efficiency requires deducting those nonlegal sanctions from damages).

> The risk to the landscape and environment entailed by Path A is 400, whereas the risk to the hikers entailed by Path B is 500. The guide chooses Path B. One of the hikers falls from a cliff while walking along the path chosen by the guide and suffers a harm of 5000. Should the guide be liable for 5000, or should he be liable for some other amount?

Whether the guide was negligent or not rests on whether he properly balanced the societal value of preserving the landscape and environment against the risk he created for the hikers by choosing Path B.[36] If the court were to apply a test based on a cost-benefit analysis, it would conclude that the guide had been negligent and impose liability on him in the amount of 5000. In contrast, applying the ORP would yield liability in the amount of 1000, causing the guide to internalize the net risk he negligently created.

Potential injurers, including public authorities, must often balance societal interests against individual interests. Thus a publisher might have to balance the societal interest in free speech against an individual's interest in her privacy and reputation.[37] Imposing liability on the publisher for libel or infringement of privacy would result in damages being awarded for the entire harm suffered by the victim. Conversely, applying the ORP would mandate reducing damages for the preservation of the societal interest in free speech, which was promoted at the expense of the individual interest in privacy and reputation. Similarly, a police officer who hit an innocent bystander while negligently shooting at robbers in a fleeing car should have balanced the societal interest in capturing the robbers against the bystanders' individual interests in their personal security.[38] Applying the ORP would again yield a reduction in the police officer's liability for the harm suffered by the bystander.

In practice, when courts award damages, they do not take into account risks that would have been posed to societal interests had the injurer behaved reasonably. Like the effect on third parties, the effect on social interests is treated as irrelevant to the matter of damages. Moreover, the argument for reducing damages awarded to individuals because the infringement of their rights enabled the promotion of societal interests could seem untenable, not only from a corrective justice perspective, but also from the standpoint of distributive justice, particularly when asserted by a wrongdoing public authority.[39] The argument for the ORP gains force, however, if

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36. One could argue that preserving the landscape and environment is a goal the tour guide should ignore, since his only task is to ensure the hikers' safety. Under this argument, others (like the Environmental Protection Agency) should take care of preserving the landscape and environment. Obviously my stance on this issue is different.

37. *See* Daily Times Democrat v. Graham, 162 So. 2d 474 (Ala. 1964); Barber v. Time, Inc., 159 S.W.2d 291 (Mo. 1942) (finding a newspaper liable for invasion of privacy after it published a picture of the plaintiff without her consent).

38. Heidbreder v. Northampton Twp. Trs., 411 N.E.2d 825 (Ohio Ct. App. 1979) (imposing full liability on the police officer).

39. Heidi M. Hurd, *The Deontology of Negligence*, 76 B.U. L. REV. 249, 258–59 (1996) (examining the notion of negligence as engaging in an activity in which those who bear the risk of being harmed are not those who stand a chance of reaping the benefits); Gregory C. Keating, *Dis-*

we are serious about the goal of ensuring that the injurer internalizes the social costs of his negligence. The injurer who has increased a risk to his victim's interests but at the same time reduced a risk to a societal interest has created a net risk that amounts to the difference between the increased risk to the victim and the decreased risk to society at large. His liability should be set accordingly.

III. Offsetting Risks and Probabilistic Recoveries

The Offsetting Risks Principle as applied to the first category of cases (where the different interests of the victim must be balanced) bears a superficial resemblance to the probabilistic recovery principle ("PRP"). The PRP imposes liability on a defendant for the harm suffered by the plaintiff multiplied by the probability that the harm was caused by the defendant's wrongdoing.[40] Some courts apply the PRP in medical malpractice cases where the doctor's negligence diminished the plaintiff's chances of recovery. To illustrate, consider the case of a patient who arrives at the hospital with a probability of recovery of .3. Because her condition is not diagnosed by the doctor in time, her probability of recovery drops to zero. The patient brings a suit against the doctor. Instead of applying the preponderance of evidence standard, under which the patient would lose because the probability that the doctor caused her harm is less than .5, the court could apply the PRP,[41] which would result in the doctor bearing liability for thirty percent of the patient's harm. The main argument in favor of the PRP is that it typically prevents underdeterrence. In cases where the likelihood of proving a causal relationship between the harm and the wrongdoing is systematically *low*, adhering to the preponderance of the evidence standard will produce *under*-deterrence, whereas the PRP will not.[42] Occasionally, however, where the

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tributive and Corrective Justice in the Tort Law of Accidents, 74 S. Cal. L. Rev. 193, 196–97 (2000); Tsachi Keren-Paz, The Limits of Private Law: Tort Law and Distributive Justice 356 (Dec. 2000) (unpublished D. Jur. dissertation, Osgoode Hall Law School, York University) (on file with author) ("The public benefits from the activities of the public authority, and therefore the public should bear the costs of this activity. When the public authority harms the plaintiff, liability should be imposed, and the public would ultimately bear the costs of the activity that benefited it and harmed the plaintiff.").

40. Ariel Porat & Alex Stein, Tort Liability Under Uncertainty 116–29 (2001).

41. In this context, the principle is known as the "lost chances of recovery principle." *See e.g.*, Delaney v. Cade, 873 P.2d 175 (Kan. 1994) (holding that, in order to recover damages for the loss of chances for a better recovery, the diminished degree of recovery must be substantial one); Falcon v. Mem'l Hosp., 462 N.W.2d 44, 56–57 (Mich. 1990), *superseded by statute*, Mich. Comp. Laws § 600.2912a(2) (1993); Perez v. Las Vegas Med. Ctr., 805 P.2d 589, 592 (Nev. 1991) (holding that a 10% probability constitutes a substantial diminished degree of recovery); Herskovits v. Group Health Coop. of Puget Sound, 664 P.2d 474 (Wash. 1983); *see also* 2 Dobbs, *supra* note 8, § 8.1(7), at 406-11; Joseph H. King, Jr., *Causation, Valuation, and Chance in Personal Injury Torts Involving Preexisting Conditions and Future Consequences*, 90 Yale L.J. 1353 (1981).

Some courts have extended the principle to other areas of the law, such as civil rights. *See e.g.*, Doll v. Brown, 75 F.3d 1200 (7th Cir. 1996) (Posner, J.) (supporting the extension of the lost chances principle to areas beyond malpractice and instructing the trial court to consider the possibility of awarding the plaintiff in an employment discrimination suit damages calculated according to the chances that his not being promoted was due to illegal discrimination).

42. *See* Porat & Stein, *supra* note 40, at 126–29.

likelihood of proving a causal relationship between the harm and the wrongdoing is systematically *high*, the application of the PRP will prevent *over*deterrence.

Thus, a common rationale exists for the PRP and ORP: both aim to make the injurer internalize the exact magnitude of the risks he wrongfully creates, no less (typically the function of the PRP) and no more (the function of the ORP). This is necessary to provide the injurer with efficient incentives to take precautions and to minimize social costs. Where offsetting risks are present and the PRP fails to achieve this goal, the ORP succeeds.

The divergence between the ORP and the PRP relates to the different efficiency flaws that each principle aims to correct. While the PRP seeks to overcome the uncertainty of the specific case at hand so that liability is set according to the probability that the particular harm was caused by the particular wrongdoing, the ORP is motivated by the presence of positive externalities and by the need to credit the wrongdoer for creating them. To illustrate the different results under the two principles, consider their application to Example 1. Recall that the doctor chose Treatment A, which entailed a risk of 500, over Treatment B, which entailed a risk of 400. A harm of 5000 in fact materialized, but there was a probability of .1 that had the doctor chosen Treatment B, a different harm of 4000 would have materialized. As explained earlier, under the ORP, liability should be set in the amount of 1000. Under the PRP, however, liability should be in the amount of 4600. There is a probability of .9 that the defendant caused harm of 5000, and there is only a probability of .1 that he caused harm of 1000 (5000–4000). Liability should therefore be calculated as:

$$L = .9 \times 5000 + .1 \times 1000 = 4600$$ [43]

The ORP has a much more ambitious objective than just accounting for the uncertainty of the particular case, which is the aim of the PRP. The ORP, as applied to Example 1 and the first category of cases, seeks to credit the injurer for any *potential* benefit of his wrongdoing that the victim *could have gained* due to the wrongdoing *regardless of whether she actually gained it or not*.[44] The ORP aims at correcting an efficiency distortion created by prevailing tort law, under which the injurer internalizes the negative effects of his wrongdoing but the positive effects are externalized. Thus in Example 1, that potential benefit is the possibility that the wrongdoing saved the victim from a harm of 4000. It is most probable that, in the case at hand, the victim has not actually gained this benefit at all. In fact, even if it could be proven that the probability that the doctor's wrongdoing saved the victim from alternative harm of 4000 is zero, the doctor's liability under the ORP should still be 1000.

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43. Another way to put it is as follows: the expected harm that would have been caused had the doctor acted reasonably should be deducted from the harm of 5000. This expected harm is .1 x 4000 = 400, and therefore under the PRP the doctor should be liable for 5000 – 400 = 4600.

44. *Cf.* Claire Finkelstein, *Is Risk a Harm?*, 151 U. PA. L. REV. 963, 967–74 (2003) (claiming that the chance of benefit is in itself a benefit).

To summarize the differences among the ORP, the PRP, and the preponderance of the evidence principle traditionally applied in tort cases, the Table below compares the outcomes reached by separately applying these principles to each of four cases. Each case involves an injurer who must choose between two risky acts, both of which adversely affect a potential victim. In all four cases, an injurer choosing between Act A and Act B should choose Act B, whose expected harm is 400, over Act A, whose expected harm is 500, but the injurer negligently chooses Act A. Case 1 is typical of the offsetting risk cases discussed throughout this Article and illustrated by Example 1. As explained above, the three principles under discussion yield different outcomes, and only the ORP makes the injurer internalize the true social costs of his wrongdoing. Case 2 is about certain harms, not risks. In this case, all three principles yield the same outcome, which leads the injurer to internalize the costs of his wrongdoing. The third and fourth cases are hybrids—certain harm on the one hand, and risk of harm on the other. In Case 3, the injurer must choose between creating a certain harm of 400 and an expected harm of 500 (a probability of .1 that a harm of 5000 will result). He negligently chooses the latter, and the harm of 5000 materializes. Both the PRP and the preponderance of the evidence principle mandate liability of 4600, while the ORP mandates liability of 1000. Only the latter liability will make the injurer internalize the actual risk created by his wrongdoing. Case 4 is the reverse scenario of Case 3: the negligent injurer chooses to create a certain harm of 500 instead of an expected harm of 400 (a probability of .1 that a harm of 4000 will result). In this case, both the ORP and the PRP yield liability of 100, which is the liability necessary for the injurer to internalize the exact social costs of his wrongdoing. The traditional preponderance of the evidence principle, however, yields liability of 500.

TABLE

Case	Act A Harm (Probability)	Act B Harm (Probability)	Liability under Preponderance of the Evidence	Liability under the PRP	Liability under the ORP
1. Risk-Risk	5000 (.1)	4000 (.1)	5000	4600	1000
2. Harm-Harm	500 (1)	400 (1)	100	100	100
3. Risk-Harm	5000 (.1)	400 (1)	4600	4600	1000
4. Harm-Risk	500 (1)	4000 (.1)	500	100	100

In sum, the ORP is the only rule that consistently achieves accurate internalization of social costs by the wrongdoer in all four cases depicted in the table.

IV. The Costs of Refusing to Apply the Offsetting Risks Principle

Prevailing tort law does not recognize the Offsetting Risks Principle. As a direct consequence, injurers must pay damages for more than the harms they negligently create. Moreover, injurers are occasionally required to pay damages for more than the harms created by their activity, negligent or not, as illustrated by Example 1. The doctor created a risk of 100, not of 500, in choosing Treatment A; but tort law currently imposes liability that is five times higher than what is necessary to make him internalize the *true* risks of his activity. But is this necessarily a bad thing? Does excessive liability generate undesirable outcomes?

In fact, in an ideal world without court error in setting the standard of care and injurer error in complying with that standard, a negligence rule leading to liability for more than the actual harm caused would not distort incentives for precautions. In that ideal world, potential injurers threatened by excessive liability would never behave negligently and would always escape liability were harm to occur. Consider, for example, an injurer who creates a risk of 200 and is subject to a liability five times the amount of the actual harm if the risk is realized due to his negligence. Assume that investing 50 in precautions reduces the expected harm from 200 to 100, while investing an additional dollar in precautions beyond that point reduces the expected harm by one dollar or less. Under the economic interpretation of the negligence rule, an injurer is considered negligent when the marginal costs of his precautions fall short of the marginal reduction in his expected damages.[45] Taking precautions beyond that point would be inefficient. In the ideal world, the potential injurer would satisfy the standard of care by investing 50 in precautions and would therefore escape liability if harm were to occur. The fact that the potential liability is five times greater than the actual harm caused by his negligence would not affect his behavior.

In our nonideal world, however, courts and injurers often make mistakes. In this world, threatening the potential injurer with greater liability than the harm actually produced by his negligence provides him with the incentive to take greater precautions than what is efficiently justified. Although he has invested 50 in precautions, the injurer would be well aware that if a harm does occur, he could bear liability five times greater than the actual harm that materialized. To avoid that risk—which could be quite high—he will tend to invest excessively in precautions, far beyond the efficient level.[46]

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45. Robert Cooter & Thomas Ulen, Law & Economics 334–35 (4th ed. 2003). Or, in more popular terms, he must invest in precautions so long as one additional dollar in precautions will reduce the expected harm by more than one dollar.

46. Note that if liability is for the exact amount of actual harm incurred by the injurer (assuming his risk neutrality), he will not invest excessively in precautions; indeed, there is no reason for him to invest an additional dollar in precautions when it will reduce the expected harm by less than one dollar.

The problem of excessive liability is exacerbated when the injurer's expected liability exceeds the expected harm of his activity. If an injurer is required to pay more in damages than the harm he created through his activity, he might refrain from engaging in that activity even if its benefits are greater than its costs. This problem is partially solved when the injurer is able to shift the extra costs of the tort liability to his potential victims through the price mechanism, but as we will see shortly, this solution does not always meet with satisfactory results.

In this Part, I will discuss three negative effects of excessive liability in cases where offsetting risks are present and the ORP is ignored. To simplify the discussion, I focus on first-category instances, in particular medical malpractice cases represented by Example 1, where the doctor's negligence increases one risk to the patient and simultaneously decreases another risk to that same patient. This is a very common occurrence, and adopting the ORP to deal with such circumstances could eliminate the negative effects of excessive liability. Among other things, the failure to recognize the ORP fosters the phenomenon of defensive medicine, which is one of the most severe side effects of medical malpractice liability.

A. *Defensive Medicine*

One of the most undesirable outcomes of medical malpractice liability is defensive medicine.[47] The threat of tort liability encourages doctors, hospitals, and medical service providers to pursue practices that reduce their liability risk at the expense of their patients' welfare. Defensive medicine is a result of externalities. When a doctor must choose between two courses of action and cannot be sure which one is more reasonable or which one a court will find reasonable in the event that the patient sues, he will choose the action that is the least risky for him. This, of course, will not necessarily be the least risky course of action for the patient. It could pose the least risk to the doctor simply because if harm ensues from that action, the doctor will not be held liable for the harm, either in whole or in part. Evidentiary barriers and high litigation costs are some of the most common reasons why doctors escape liability and why costs are externalized to their patients.

A common example of defensive medicine can be found in obstetrics. Research shows that cesarean deliveries are performed in the United States at a much higher than optimal rate.[48] A plausible explanation traces this phe-

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47. *See* Alec Shelby Bayer, Comment, *Looking Beyond the Easy Fix and Delving into the Roots of the Real Medical Malpractice Crisis*, 5 HOUS. J. HEALTH L. & POL'Y 111, 114 (2005); Chandler Gregg, Comment, *The Medical Malpractice Crisis: A Problem with No Answer?*, 70 MO. L. REV. 307, 318–19 (2005); Kristie Tappan, Note, *Medical-Malpractice Reform: Is Enterprise Liability or No-Fault a Better Reform?*, 46 B.C. L. REV. 1095, 1096 (2005).

48. Lowering the cesarean rate in the United States has been a goal for the past twenty-five years. U.S. DEP'T OF HEALTH & HUMAN SERVS., NAT'L INST. HEALTH PUB. NO. 82-2067, CESAREAN CHILDBIRTH: REPORT OF A CONSENSUS DEVELOPMENT CONFERENCE 4 (1981). Cesarean delivery rates in the United States rose dramatically from 4.5 per 100 births in 1965 to 24.1 per 100 births in 1986. A.R. Localio et al., *Relationship between Malpractice Claims and Cesarean Delivery*, 269 J. AM. MED. ASS'N 366, 366 (1993). In response to the growing concerns in the 1980s

nomenon to defensive medicine. When the doctor chooses vaginal delivery and harm materializes, he is frequently sued, whereas in the event of a cesarean delivery, the patient rarely sues. Arguably this happens not because cesarean deliveries never end in harm, but because either the harm is too minor to justify a legal suit or there is a latent harm with long-term effects that can hardly be traced back years later to the operation. The result is that most of the harms caused by cesarean deliveries are externalized to the patient, while most of the harms caused by vaginal deliveries are internalized to the doctor.[49] Lowering physician liability would decrease defensive medicine, because it would decrease doctors' gains from defensive medicine. Thus if liability were to stand at zero, the practice of defensive medicine would drop almost[50] to zero. However, although lowering liability below the social costs of doctors' negligence would decrease the practice of defensive medicine, it could also be detrimental to precaution-taking. For example, if liability is lower than the social costs of their negligence, doctors might not utilize cost-justified tests that decrease patient risks unless they could shift the costs of the tests to the patients. To ensure efficient incentives, liability should be set at the level of the social costs of the particular action. Any liability above these social costs would lead to a boost in the practice of defensive medicine and likely provide doctors with an incentive to take excessive precautions.[51] Accordingly, applying the ORP would reduce liability precisely to the point of the social costs of doctors' negligence.[52]

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about the rising cesarean rate, the U.S. Department of Health and Human Services established decreasing cesarean deliveries as one of the Healthy People Year 2000 objectives. U.S. DEP'T OF HEALTH & HUMAN SERVS., HEALTHY PEOPLE 2000 § 14.8 (1990). National efforts to decrease the cesarean delivery rate now focus on low-risk women as defined in the Healthy People 2010 objectives, aiming for a rate of no more than 15 per 100 births. U.S. DEP'T OF HEALTH & HUMAN SERVS., 2 HEALTHY PEOPLE 2010, AT 16-9 (2d ed. 2000), *available at* http://www.healthypeople.gov/Document/pdf/Volume2/16MICH.pdf.

49. Obstetricians are experiencing an ever-increasing rate of malpractice claims against them. Roger A. Rosenblatt et al., *Why Do Physicians Stop Practicing Obstetrics? The Impact of Malpractice Claims*, 76 OBSTETRICS & GYNECOLOGY 245, 249 (1990). The frequency of such claims has increased such that, in 1999, 76.5% of obstetrician-gynecologists surveyed by the American College for Obstetricians and Gynecologists reported having been sued at least once. Sarah Domin, Comment, *Where Have All the Baby-Doctors Gone? Women's Access to Healthcare in Jeopardy: Obstetrics and the Medical Malpractice Insurance Crisis*, 53 CATH. U. L. REV. 499, 504 (2004). In fact, "fear of being sued if complications arise in a vaginal delivery has contributed to the rising number of Cesarean sections." Elizabeth Swire Falker, *The Medical Malpractice Crisis in Obstetrics: A Gestalt Approach to Reform*, 4 CARDOZO WOMEN'S L.J. 1, 15 (1997). Studies have examined the impact of the risk of a malpractice claim on the incidence of cesarean deliveries and found that a significant relationship exists between the rate of cesarean procedures and malpractice claim frequency. Michael Daly, Comment, *Attacking Defensive Medicine Through the Utilization of Practice Parameters: Panacea or Placebo for the Health Care Reform Movement?*, 16 J. LEGAL MED. 101, 105 (1995); *see also* Antonella Vimercati et al., *Choice of Cesarean Section and Perception of Legal Pressure*, 28 J. PERINATAL MED. 111, 116 (2000) ("[T]he perception of legal pressure was directly related to the rate of cesarean section in each unit.").

50. Nonlegal sanctions could also trigger defensive medicine practices. For example, a doctor might tend to choose a course of treatment whose failure would be less discernible to colleagues and thus free from condemnation by those colleagues.

51. *See infra* Section IV.B.

52. Theoretically, the practice of defensive medicine could be eliminated through the market by compensating doctors who must choose the courses of action that poses a greater risk to them.

To illustrate how adopting the ORP would reduce the practice of defensive medicine, let us return to obstetrics. Suppose that a doctor performs a vaginal delivery and a harm to the baby materializes. If the court were to hold the doctor liable for negligently choosing this type of delivery but apply the ORP, it would reduce his liability to reflect the net risk created by his negligent choice. This net risk is the difference between the risk created by the vaginal delivery and the risk that would have been created had the doctor chosen to deliver the baby by cesarean section. Reducing the doctor's liability for negligently choosing vaginal delivery would result in a decrease in doctors' expected gains from choosing cesarean delivery and a consequent reduction in the practice of defensive medicine.

B. *Overinvestment in Precautions*

In the absence of the Offsetting Risks Principle, injurers in general—and doctors in particular—overinvest in precautions. Consider two types of precautions doctors can take in cases illustrated by Example 1, where Treatment A entails a risk of 500 and Treatment B a risk of 400. One type of precaution consists of the additional measures necessary to administer Treatment B compared to Treatment A, including additional medical tests and a longer period of hospitalization. Another type of precaution consists of the measures necessary to determine the magnitude of the risks entailed by each treatment, including gathering information about the different risks and consulting with other doctors.

Let us consider the first type of precaution. In Example 1, it would be efficient for the doctor to choose Treatment A (a risk of 500) over Treatment B (a risk of 400) if the marginal cost of administering Treatment B instead of Treatment A is greater than the accompanying marginal benefit in decreased risks.[53] The doctor, however, anticipates losing 500 in expected value if he chooses Treatment A and is mistakenly found negligent. Therefore, he might choose Treatment B even if Treatment A would have been the efficient choice, because he is uncertain whether he would be able to convince a court, in the event that he chooses Treatment A and harm occurs, that he was not negligent: the marginal costs associated with choosing Treatment B would have exceeded its marginal benefits. Indeed, sometimes

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Doctors will be compensated through the price paid by their patients, and their bias towards the less risky course of action will disappear. Market imperfections, however, often preclude such arrangements. *See* TOM BAKER, THE MEDICAL MALPRACTICE MYTH 64–65 (2005) ("[P]hysicians have little or no ability to raise prices in response to increased costs. When a malpractice insurance crisis hits, the burden falls disproportionately on physicians in high-risk specialties and locations, who cannot raise their prices in response."); Michelle M. Mello & Carly N. Kelly, *Effects of a Professional Liability Crisis on Residents' Practice Decisions*, 105 OBSTETRICS & GYNECOLOGY 1287, 1293–94 (2005); Peter Eisler et al., *Hype Outraces Facts in Malpractice Debate*, USA TODAY, Mar. 5, 2003, at 1A (claiming that the cause of doctors' inability to pass higher costs to patients is the limitations on reimbursements set by managed care insurers, Medicare, and Medicaid).

53. That is,

$$c_B - c_A > r_A - r_B$$

where c_A and c_B are the costs of Treatments A and B, respectively, and r_A and r_B are their risks.

the cost difference, in its entirety or in part, is not verifiable in court (such as investment of time or other nonmonetary efforts), and even when it is verifiable, the doctor is well aware that there is always a risk of error on the part of the court or the doctor himself.[54] Applying the ORP would prevent these distortions in incentives for doctors, because the Principle brings the amount of liability into line with the social costs of the negligent behavior.[55]

The second type of precaution relates to gathering information about the risks entailed by the two treatments in order to choose the right one. Consider Example 1 and assume that the costs of administering the two treatments are the same and that the reasonable choice is the one with lower risks. The efficient level of investment in gathering information about the risks is only 50, not 100, because the doctor has a 50% chance of making the right choice even with no information about the risks of the two treatments. Assuming risk neutrality, investing more than half of the social costs associated with making the wrong choice is inefficient. But the doctor in Example 1 would invest more than 50 in gathering information for reasons similar to those discussed with respect to the first type of precaution. Applying the ORP would prevent such an overinvestment.

A strict liability rule would also prevent overinvestment in precautions. I discuss strict liability as an alternative to the ORP below in Section V.D.

C. *Overburdening the Negligence-Producing Activity and the Relevance of a Contractual Relationship*

When the injurer is liable for more than the harm his activity causes, he may decrease that activity or forego it all together, even if it is desirable

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54. To understand the distortion in its most extreme form, suppose that Treatment A entails a risk of 500 and Treatment B entails a risk of 499. This raises the anomaly of a doctor's great willingness to choose Treatment B even if the additional costs necessary to administer that treatment are much higher than 1. The ORP prevents this anomaly.

55. At first glance, one could mistakenly confuse the argument made in this Article—that ignoring the ORP burdens injurers with liability for more harm than what they actually caused—with another argument—that injurers who do not satisfy the standard of care could be liable for harm that was not caused by their negligence, thereby resulting in overdeterrence. Under the latter argument, a rule of negligence creates discontinuity or a sudden jump in liability, because the expected liability of an injurer who satisfies the standard of care drops to zero, while any deviation from that standard results in full liability for any harm that occurred. This discontinuity and its behavioral consequences were originally explained in Robert D. Cooter, Commentary, *Economic Analysis of Punitive Damages*, 56 S. CAL. L. REV. 79, 80–89 (1982), with Cooter later explaining that the discontinuity is due to incomplete information available to the courts or the probabilistic nature of the causal connection. *See* Robert D. Cooter, *Punitive Damages for Deterrence: When and How Much?*, 40 ALA. L. REV. 1143, 1155 (1989). Mark Grady and Marcel Kahan also have demonstrated that the discontinuity of liability as well as the risk of burdening the negligent injurer with liability for more than the harm he caused completely disappear when causation rules are properly applied so that the injurer is liable only for those harms that would not have been created had he behaved reasonably. Mark F. Grady, *A New Positive Economic Theory of Negligence*, 92 YALE L.J. 799, 812–13 (1983); Marcel Kahan, *Causation and Incentives to Take Care under the Negligence Rule*, 18 J. LEGAL STUD. 427, 427-29 (1989). In contrast, the argument made in this Article for adopting the ORP holds regardless of the information available to courts or juries and even when the *prevailing* causation rules are properly applied: ignoring offsetting risks will result in liability for much more than the harms negligently caused by injurers.

from a social perspective. If the actor derives a benefit of 300 from the activity and the harm amounts to 100, liability of 500 would inefficiently cause him to cease his activity. Not applying the ORP could have this effect. This is quite clear with respect to all cases falling within the three categories discussed in Part II—where the injurer and the victim are strangers to one another. The issue becomes more complicated when a contractual relationship exists between the parties, as illustrated by Example 1. Would imposing liability on doctors, in excess of the harm they cause, inefficiently repress their activity?

At first glance, the answer to this question seems to be no. The scope of doctors' liability is irrelevant to the activities they engage in, because one way or another, doctors could shift their liability costs to patients by increasing prices.[56] If liability in Example 1 is 500 instead of 100, the patient will pay more in the price of the service she receives but will be awarded with more damages if harm occurs. Consequently, both patient and doctor—assuming they are risk neutral—will be indifferent to the scope of the doctor's liability. This analysis, however, is overly simplistic. As shown earlier, refraining from reducing liability for the offsetting risks exacerbates defensive medicine and gives doctors an incentive to overinvest in precautions. These drawbacks, which can seldom be cured contractually,[57] are shouldered by the patient, with the result that the excessive liability leads to a diminishment in the overall utility a patient can derive from her doctor's services. This utility is determined by the quality of the service (which the practice of defensive medicine decreases), the price the patient pays (which the excessive costs of precaution increases), and the scope of the doctor's liability. The erosion of the patient's utility from the medical services renders their consumption suboptimal.[58]

V. Criticism and Objections

The central objection to the Offsetting Risks Principle may be that victims will not be fully compensated for the harms they suffer. Partial compensation may seem especially troubling when the offsetting risks relate to a third party or society in general: why should the victim, in effect, have to pay for the benefits that unrelated parties receive at her expense? Another possible objection to the ORP is that courts' failure to offset risks often cures another malfunction plaguing tort law—the underenforcement of legal norms. There may also be a pragmatic objection to the ORP: its application requires that courts use costly information, which increases litigation costs. Finally, one could argue that other mechanisms could cure some or all of the

56. In fact, this assumption does not always hold. *See supra* note 52.

57. *See supra* note 52; *infra* Section V.D.

58. Note that the underlying assumption of the discussion in the text above is that the law prohibits injurers and victims from opting out of the prevailing liability regime. *See infra* Section V.D.

inefficiencies created by courts' failure to offset risks. This Part addresses each of these objections in turn.

A. *Undercompensation of Victims*

Applying the ORP naturally leaves victims partially uncompensated for the harm they suffered due to the injurer's wrongdoing. This outcome cannot be reconciled with principles of corrective justice, which mandate that the injurer rectify the injustice he inflicted on his victim by way of compensation.[59] The ORP clashes with this principle, because it leads to only partial rectification of the injustice. Nevertheless, there are several reasons for dismissing this concern of undercompensation, in addition to the efficiency rationale already discussed in this Article.

The first and most important reason is the victim's ex ante interest in applying the ORP to cases falling in the first category. In the second and third categories of cases, the victim obviously has an ex ante interest in receiving the greatest amount of compensation possible, especially when there is no contractual relationship between the injurer and the victim and when she bears none of the negative effects of high compensation. The greater compensation would provide the injurer with a stronger incentive to overprotect the victim's interests, even if at the expense of third parties or society as a whole.[60] The situation is completely different in the first category of cases, when all interests involved are the victim's interests. The following discussion focuses on medical malpractice cases, as illustrated by Example 1, but could easily be applied to other cases.

One reason for a patient's ex ante interest in the nonapplication of the ORP would be her preference for full compensation, even if, as a risk-averse person, she must pay a premium to acquire that entitlement. The difficulty with this insurance argument lies in the anomaly it produces. If full compensation is the patient's motive, why should liability be limited only to negligent medical accidents and not to all harms, regardless of how they unfolded? Indeed, the risk-averse patient would presumably be willing to pay a higher premium and receive full coverage in return. Thus the insurance argument cannot justify a rule of negligence (as opposed to strict liability, which has its own flaws)[61] by the patient's ex ante interest in full compensation. A much better reason for the victim to prefer a negligence rule to a no-liability rule would be her interest in optimal deterrence of her doctor.

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59. *See* WEINRIB, *supra* note 2, at 19–20.

60. It is possible to conceive of cases falling into the second category where the victim's ex ante interests are less clear. Take, for instance, the example of the emergency room doctor who must decide which patient to treat first. *See supra* text accompanying note 32. A threat of high liability in the absence of the ORP could encourage the doctor to treat the patient more likely to bring a suit against him. Applying the ORP will result in lower liability and a decrease in the practice of this kind of defensive medicine. *See supra* Section IV.A. Patients less inclined to sue the doctor may prefer such a liability regime.

61. *See infra* Section V.D.

Optimal deterrence, as this Article demonstrates, is better achieved under the ORP. In particular, there is no reason for the patient to prefer a rule that decreases the surplus she can secure from her interaction with her doctor. A rule that rejects the ORP results in precisely this undesirable effect. As explained above, nonadoption of the ORP leads to more defensive medicine and overinvestment in precautions, both borne by the patient. Conversely, adopting the ORP would increase the total surplus the patient would receive from contracting medical services and would, therefore, be the preferable rule from her perspective.[62] It is hard to see how the patient would suffer injustice under the ORP.

A second reason, rooted in retributive justice, can explain for one set of cases—those in which the defendant is a recurrent wrongdoer—why the ORP can be less troubling from a moral perspective. In such instances, the ORP will make the wrongdoer pay over time no more and no less than the harm he caused, whereas prevailing tort law currently makes him pay in excess of this harm. Because justice considerations relate not only to the victim but also to the injurer, the objection to applying the ORP in these cases seems less compelling. To illustrate, let us frame Example 1 as a repeat scenario: the same doctor frequently undertakes procedures that involve offsetting risks. Over time, without the ORP, the doctor pays damages far beyond what he causes to his patients. As explained above,[63] if the scenario presented in Example 1 were to recur ten times, the harm caused by the doctor's negligence (or by his activity, negligent or not) would be 1000, not 5000. Although the ORP leads to the violation of the corrective justice principle requiring that the wrongdoer pay full compensation to the victim, it is at the same time consistent with a retributive justice principle: the injurer should be liable for the precise amount of the harm he caused.[64]

Last, but not least, problems of undercompensation could be solved outside the realm of tort law, either by social insurance or by private insurance.[65] Recall that many accidents, medical and otherwise, are not compensated under prevailing tort law. Also recall that in cases illustrated

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62. Porat, *supra* note 19, at 112–16.

63. *See supra* Part I.

64. *Cf.* David Lewis, *The Punishment That Leaves Something to Chance*, 18 PHIL. & PUB. AFF. 53 (1989) (arguing that retributive justice mandates that criminals be exposed to the same risk to which they expose their victims); Jeremy Waldron, *Moments of Carelessness and Massive Loss*, *in* PHILOSOPHICAL FOUNDATIONS OF TORT LAW 387 (David G. Owen ed., 1995) (applying the same argument to tort law). It is possible to reconcile the PRP with principles of corrective justice. In Example 1 cases, applying the PRP would result in a damages award of 4600 rather than 5000. *See supra* Part III. The PRP is reconcilable with principles of corrective justice because the PRP is more about evidence than substance, and corrective justice is generally indifferent to evidence. Moreover, the PRP is aimed at overcoming the uncertainty of the *specific* interaction between the plaintiff and the defendant, whereas the ORP has a different objective. *See supra* discussion accompanying note 44. One of the tenets of corrective justice is its focus on the specific interaction between the injurer and the victim. *See* JULES L. COLEMAN, RISKS AND WRONGS 354–60 (1992); WEINRIB, *supra* note 2, at 64–66; Stephen R. Perry, *The Moral Foundations of Tort Law*, 77 IOWA L. REV. 449, 507–14 (1992).

65. The risk that poor people would not be able to purchase insurance is a general problem that can be solved in our context either through mandatory first-party insurance or social insurance.

by the first category of cases, including Example 1, the definition of "harm caused by the doctor," as opposed to "harm caused by nature," is, at the very best, unclear. A patient who might have been nonnegligently exposed to an expected harm of 400—but instead was negligently exposed to an expected harm of 500 which was realized into an actual harm of 5000, and is compensated for that harm—could be considered to have received a windfall. The reason for that is that, had the doctor nonnegligently exposed her to an expected harm of 400 and that risk materialized into an actual harm of 4000, the victim would have remained completely uncompensated!

B. *Curing Underenforcement*

Underenforcement of the law is a generally pervasive problem,[66] and the area of provision of medical services provides no exception. Many patients who suffer harm due to malpractice do not bring suits against their doctor or else fail to succeed in justified actions.[67] When the law is not fully enforced, wrongdoers do not bear the full social costs associated with their wrongdoings and, as a result, do not take efficient precautions. The nonapplication of the ORP could mitigate this underenforcement. Thus, if in cases illustrated by Example 1 (as well as in other examples discussed in this Article), only 20% of such cases end up in court and result in the imposition of liability, perhaps liability in the amount of the entire harm (and not merely for a fraction of it as mandated by the ORP) could remedy the problem of underenforcement.

This argument is not persuasive. First, it is hard to assess the scope of underenforcement in the provision of medical services.[68] It is quite possible that there are many positive externalities present in this field—that is, benefits not captured by prices—that offset the negative externalities arising from underenforcement.[69] Second, even if underenforcement exists in the

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66. But sometimes the problem is overenforcement. *See* Richard A. Bierschbach & Alex Stein, *Overenforcement*, 93 GEO. L.J. 1743 (2005) (discussing when overenforcement arises and how the law of evidence and procedure handles it).

67. *See* BAKER, *supra* note 52, 22-44 (arguing that there is a huge underenforcement problem in medical malpractice, because many patients injured by medical malpractice do not sue).

68. *But see id.* at 63 (presenting evidence of the magnitude of the underenforcement problem).

69. David S. Bloch & William Robert Nelson, Jr., *Defining "Health": Three Visions and Their Ramifications*, 1 DEPAUL J. HEALTH CARE L. 723, 731 (1997) ("Commentators who consider health a non-marketable good contend that there are elements of health which, though valuable, are unquantifiable, such as hope, compassion, and the extension and preservation of life. . . . Health's social benefits are not fully realized by the market price it commands.") (footnote omitted); Maja Campbell-Eaton, Student Article, *Antitrust and Certificate of Need: A Doubtful Prognosis*, 69 IOWA L. REV. 1451, 1459 (1984) ("Moreover, health care usually is viewed as a 'merit good,' with benefits extending beyond its economic value. This view is reinforced by the ethical mandates of the health professions and by a widespread belief that 'more is better' in the provision of medical services."); T.R. Marmor et al., *Medical Care and Procompetitive Reform*, 34 VAND. L. REV. 1003, 1009 (1981) ("Improved health, the anticipated outcome of medical care, has positive externalities. This makes medical care a merit good, and, unlike many other economic goods, one that should not be allocated solely on the basis of ability to pay."); *See also* Stuart H. Rome, *Medicine and Public Policy: Let Us*

provision of some medical services, the phenomenon is not present in the provision of others, where offsetting risks may exist. It is difficult to see any benefit in creating overenforcement by ignoring these risks, simply because there is underenforcement elsewhere. In particular, there is no reason to assume that the presence of offsetting risks is a good proxy for underenforcement that can be cured by ignoring offsetting risks altogether. Finally, even if there is underenforcement in the provision of some medical services, or in certain other fields where offsetting risks are present, there is no reason to assume that the extent of the underenforcement and the extent of the overenforcement created by courts' disregard for offsetting risks are of similar magnitude. These are two distinct problems that should be dealt with separately and should not be intertwined.

C. *Information and Application*

Another possible objection to adopting the ORP is that its application requires more information for courts (and juries) than the information needed for damages awards under prevailing tort law. This complicates the process of awarding damages and raises litigation costs.

Under the ORP formula set out in this Article, liability should be calculated as follows:

$$L = h_A \frac{r_A - r_B}{r_A}$$ [70]

This formula accounts for the offsetting risks (r_B), the risks that are realized as harm to the victim (r_A), and the harm that eventually materialized (h_A). Most of this information is irrelevant—goes the objection—when courts award damages under prevailing negligence law. Under the prevailing regime, courts do, indeed, need to measure the harm that materialized, but they need only to determine whether the injurer was negligent or not: measuring r_A and r_B, which is crucial to the application of the ORP, is not necessary under prevailing law.

The requirement of additional information cannot justify rejecting the ORP for two reasons. First, courts often use the Hand Formula to determine whether an injurer was negligent or not, comparing the precautions the injurer failed to take and the expected harm that would have been reduced had those precautions been taken. Expected harm under the Hand Formula is no more than the difference between the ORP formula's r_A and r_B. It is true that courts applying the Hand Formula need not accurately measure the expected harm, because it is sufficient that they determine whether the costs of the untaken precautions were higher or lower than the expected harm, even without verifying the exact figures. Still, courts need *some* information

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Look Before We Leap Again, 41 MD. L. REV. 46, 48 (1981) (listing a number of potential benefits of medical care that possibly escape reflection in market prices).

70. *See supra* text accompanying note 17.

about the various risks involved (r_A and r_B), and the additional information required to apply the ORP is not necessarily difficult to gather.

Second, and more importantly, the application of the ORP need not be accurate to its theoretical limits to be an improvement over the prevailing regime. Even rough estimations of r_A and r_B are better than nothing at all. In fact, ignoring offsetting risks across the board is tantamount to assuming that these risks are *always* zero. This is most certainly not the case.

It is the task of the legislature to change the law to allow the courts, especially in medical malpractice cases, to reduce damages when offsetting risks are present. Courts should have at their disposal a legislated menu of possibilities from which they can choose, guided by the simple formula set out in this Article. The legislature could allow courts to award damages, for example, for 10%, 25%, 50%, 75%, or 100% of the harm. Courts would then not need exact figures in order to apply the ORP formula and could make do with rough estimates. Thus aided by a legislative arrangement, the formula could be easily and effectively applied.[71]

D. *Other Alternatives*

The inefficiency resulting from ignoring offsetting risks could arguably be resolved through mechanisms other than the ORP. In this final Section, I briefly discuss some of these possible alternatives.

First, instead of adopting the ORP, the law could switch from a negligence rule to a strict liability rule to resolve the inefficiency of the overinvestment-in-precautions phenomenon described in Section IV.B. Recall that under prevailing negligence law, this phenomenon is triggered by the great disproportion between a doctor's expected liability if he makes the right choice and his expected liability if he makes the wrong choice. The ORP reduces the difference between the two and aligns the doctor's liability with the social costs of his negligence. In Example 1, if the ORP were applied, the doctor's expected liability for wrongfully choosing Treatment A would be 100, whereas his expected liability for choosing Treatment B would be 0. This difference of 100 in the expected liabilities would remain unchanged if we were to switch to a strict liability standard: the doctor's expected liability would be 500 for choosing Treatment A and 400 for choosing Treatment B. Under both the ORP and a strict liability rule, the doctor in Example 1 would invest in precautions at the efficient level.

Discussing the desirability of switching to a strict liability rule for medical and other types of accidents is beyond the scope of this Article. It is important to note, however, that strict liability for medical accidents would not solve the defensive medicine problem discussed in Section IV.A. In fact, a rule of strict liability for doctors would further foster the practice of

71. Another issue relating to the courts' lack of information is that, under certain circumstances, the ORP encourages potential injurers like doctors to artificially raise the offsetting risks in order to reduce their liability should harm occur. When such a measure is verifiable, courts can refrain from offsetting the enhanced risks and deduct only the risks that would have existed even absent the injurer's artificial production of risks.

defensive medicine. Under such a rule, doctors presumably would gain more than what they currently gain under the prevailing negligence rule from choosing courses of action where it is very hard to trace ensuing harms back to the medical treatment they administered. Moreover, liability for all harms suffered by their patients would make doctors liable for far more harms than those created by their activity, negligent or not. If, in Example 1, the doctor reasonably chooses Treatment B and a harm of 4000 materializes, making him bear liability is tantamount to making him his patient's health insurer. Under such a legal rule, the doctor would be liable for harms resulting from the patient's preexisting conditions in no way related to the doctor's behavior. Making the doctor his patient's health insurer and expanding his liability accordingly would produce difficulties that cannot be thoroughly discussed here.[72]

A second alternative to adopting the ORP is for the government to subsidize injurers for the positive externalities created by their behavior, negligent and nonnegligent alike. This solution has one appealing advantage: if it could be implemented, victims would be fully compensated even in the presence of offsetting risks, while injurers would have efficient incentives. Moreover, it would mitigate another possible problem with the ORP—under the ORP, those who are credited for positive externalities are those who negligently inflicted harm, whereas those who did not inflict any harm get no credit even though they also created positive externalities.

Even putting the political obstacles aside, this alternative is not a practical option, certainly not in the area of medical malpractice. It could work if, and only if, ignoring offsetting risks burdened doctors with excessively high costs, but did not affect their incentives to take precautions. But as illustrated in this Article, ignoring offsetting risks distorts the incentives of doctors by encouraging them to overinvest in precautions and to practice defensive medicine. As long as the government does not proceed on a case-by-case basis to fine tune the subsidy to match the positive externalities the injurer has created, the injurer's incentives will remain suboptimal. For obvious reasons, a case-by-case subsidy is impractical and therefore does not constitute a satisfactory solution to the problem of offsetting risks.

A third alternative is to leave it to the injurer and victim, like the doctor and patient, to make the efficient contract they desire instead of imposing the ORP. This solution is relevant only for those cases in which the injurer and victim are not strangers and the transaction costs of drafting the contract between them are not prohibitively high. Note also that the law forbids certain injurers and victims, including doctors and patients, from opting out of the prevailing liability regime that fails to take offsetting risks into account.[73]

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72. Since the price patients pay does not capture all benefits created by medical treatments (positive externalities) and since it is difficult for physicians to raise prices to cover their increased costs, under strict liability physicians will charge much less than necessary to respond to the broad liability imposed on them. *See supra* notes 53, 69.

73. *See e.g.*, Tunkl v. Regents of Univ. of Cal., 383 P.2d 441 (Cal. 1963); Health Net of Cal., Inc. v. Dep't of Health Servs., 6 Cal. Rptr. 3d 235 (Cal. Ct. App. 2003); Richard A. Epstein, *Con-*

Were this not the case, the proposal to adopt the ORP would have been a scheme for an efficient default rule, which most parties would be willing to adopt in their contracts.

A fourth and final alternative is to relax the standard of care when offsetting risks are present and impose liability only for gross negligence. Although this could mitigate some of the negative effects that arise when offsetting risks are completely ignored, it could hardly serve as a comprehensive solution to the problem. Unlike the ORP, it cannot be fine tuned for each case, and therefore its impact does not extend to all relevant cases.[74]

CONCLUSION

This Article has argued that when an injurer's wrongdoing causes harm to a victim but simultaneously decreases other risks, liability should be reduced below full compensation. This holds for all cases in which the potential injurer must balance his victim's interests and choose the course of action that is most beneficial to the victim. Many cases of medical malpractice can be classified as such. If this argument is accepted and liability reduced due to the presence of offsetting risks, the result will be a tremendous and desirable decrease in the damages awarded in medical malpractice suits. Doctors will be liable for the amount of the social harm created by their negligence—and no more. The practice of defensive medicine will be reduced and overinvestment in precautions discouraged, with the main beneficiaries being the patients, who will pay less and receive more in return. Any problem of undercompensation for patients can, and should, be resolved outside the boundaries of tort law. Moreover, the diminishment in damages awards will save huge amounts of money currently being pocketed by attorneys in the form of contingent fees.[75]

Many scholars are suspicious of tort law's ability to efficiently deter wrongdoers. These scholars maintain that, at least in certain areas, it is better to replace tort law with insurance schemes (such as social insurance) in order to avoid the high costs entailed by the existing legal regime.[76] The counterclaim is that even though tort law is far from being ideal, it still works and has a role to play in deterrence.[77] This Article has sought to show that optimal deterrence can, indeed, be better achieved: not only would reducing damages due to offsetting risks improve incentives, it would also reduce the general costs involved in the existing legal regime. Lowering damages makes the operation of tort law less expensive.

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tractual Principle Versus Legislative Fixes: Coming to Closure on the Unending Travails of Medical Malpractice, 54 DEPAUL L. REV. 503, 505–06 (2005).

74. *See* Porat, *supra* note 19, at 126–28, 131–35, 138–40.

75. *See* STEPHEN D. SUGARMAN, DOING AWAY WITH PERSONAL INJURY LAW: NEW COMPENSATION MECHANISMS FOR VICTIMS, CONSUMERS, AND BUSINESS 40, 184 (1989).

76. *Id.* at 169.

77. Gary T. Schwartz, *Reality in the Economic Analysis of Tort Law: Does Tort Law Really Deter?*, 42 UCLA L. REV. 377 (1994).

The Article proposes a framework that is not limited to medical malpractice cases or even to cases where the injurer balances among conflicting interests of the victim. As shown, there are many instances in which the potential injurer must balance the victim's interests against the interests of third parties or society at large. If tort law strives for optimal deterrence—that is, minimization of social costs—then in all of these cases offsetting risks should reduce liability. If, however, one accepts that principles of corrective justice and the goal of compensation should play a determinative role in tort law, and I believe they most certainly do, then cases in which the offsetting risks relate to third parties or society at large could require different treatment. In such cases, application of the ORP is far more problematic.

The area in most urgent need of the ORP is medical malpractice. Offsetting risks are a very common phenomenon in the provision of medical services, and liability in some medical fields is excessively high, with patients typically paying the price of this inflated liability. I propose that the legislature authorize courts, at least in medical malpractice cases, to reduce damages when offsetting risks are present. The reduction could be in a roughly estimated amount, according to a menu of possibilities set by the legislature from which courts would choose, guided by the simple ORP formula set out in the Article. Offsetting risks can—and should—be taken seriously by the law.