RE-EXAMINING LIABILITY RULES WHEN INJURERS AS WELL AS VICTIMS SUFFER LOSSES

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In his recent article, "Liability Rules When Injurers as Well as Victims Suffer Losses," Avon Leong examines the question whether the standard liability rules—pure negligence, negligence with contributory negligence, pure strict liability and strict liability with contributory negligence—can be used to induce efficient care-taking by individuals in those circumstances where both injurers' and victims' care-taking affects the probability of an accident and where both injurers and victims suffer losses. It is now a standard result that the three "negligence-inclusive" liability rules (pure negligence, negligence with contributory negligence and strict liability with contributory negligence) all can be used to induce efficient care-taking by both parties where the individuals are engaged in bilateral-care and unilateral-risk activities. In contrast, Leong found that where the accident results from a bilateral-care and bilateral-risk activity (in that it involves a risk of injury to both the victim and the injurer), none of the standard liability rules can be employed to induce efficient care-taking by both parties.

Leong's results, while important, depend on a somewhat unusual assumption about the nature of the tort system. Leong assumes that although victims can sue injurers for the losses the victims sustain, injurers cannot sue victims for the losses the injurers sustain. In the actual world of the tort system, however, when the activity in question is a bilateral-risk activity we no longer have clearly defined injurers and victims. Rather, each individual engaged in a bilateral-risk activity is simultaneously a potential tortfeasor and a potential tort victim. Should an accident occur between two individuals in which both of...
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the individuals are injured, each individual may sue the other. Moreover, depending on what liability rule governs the individuals' activities, and depending on the level of care taken by the parties to the accident, there will be circumstances when each party to the accident will recover from the other.

For example, if a pedestrian dashes suddenly and unexpectedly into the path of a speeding car and both the pedestrian and the motorist are injured, it is difficult to say, a priori, who is the victim and who is the injurer. Certainly, the tort law makes no such a priori distinction. The pedestrian may sue the motorist and the motorist may file a counterclaim for his injuries against the pedestrian. Which, if either, of the parties will recover depends on what liability rule governs the cases and on the level of care of each of the parties. For example, in those cases where each individual was negligent, each individual will recover from the other under either pure negligence or pure strict liability; under either strict liability with contributory negligence or negligence with contributory negligence, neither negligent individual will recover from the other.

This comment re-examines the issue of efficient liability rules for injuries resulting from bilateral-risk activities under the assumption that neither party to the accident is a priori immune from liability. Although Leong examines both the unilateral-care and the bilateral-care case, only the bilateral-care case is considered here. It is determined, in contrast to Leong's conclusions, that each of the three negligence-inclusive liability rules can be used to induce efficient care-taking by both individuals. Pure strict liability, however, cannot be used to induce efficient care-taking by either party.

The procedural mechanism that allows each party to sue the other in a single action is the counterclaim. Under the federal rules, the defendant may bring as a counterclaim any claim he has against the plaintiff, and must bring those claims that arise "out of the transaction or occurrence that is the subject matter of the opposing party's claim." Rule 13, Federal Rules of Civil Procedures; see Richard Freer, "Avoiding Duplicative Litigation: Rethinking Plaintiff Autonomy and the Court's Role in Defining the Litigative Unit," 50 Univ. Pitts. L. Rev. 809 (1989). States also have similar rules that enable (and may require) the defendant to assert as a counterclaim any claims he has against the plaintiff arising out of his accident with the plaintiff. See generally Jack Friedenthal, Mary Kay Kane and Arthur Miller, Civil Procedure, § 6.7, p. 350 (1985).

This discussion of the interaction of the parties' care levels and damages under negligence rules abstracts away from the requirement of the tort law that the plaintiff establish that the defendant's acts "caused" his harm. For an excellent discussion of the importance of causation rules for the efficiency of negligence liability rules, see Marcel Kahan, "Causation and Incentives to Take Care Under the Negligence Rule," 18 J. Legal Stud. 427 (1989).

Leong acknowledges that his results depend on the assumption that injurers cannot sue victims. Specifically, in the last four sentences of his conclusion, Leong asserts, without proof, that if injurers can sue victims, negligence with contributory negligence and strict liability with contributory negligence both are efficient. Leong, supra note 1, p. 110. This assertion, although correct, cannot be made so summarily. As this article shows, and as Diamond has suggested, for these two liability rules to be efficient the possibility of an equilibrium with both parties negligent must be ruled out. Cf. Peter Diamond, "Accident Law and Resource Allocation," 5 Bell Journal of Economics 366, 399 (1974) (suggesting that in the bilateral risk context the negligence with contributory negligence liability rule may result in an equilibrium with both parties negligent). Leong's analysis at the end of his article does not rule out this possibility.

In addition, a thorough analysis of the issue should include a consideration of whether either pure negligence or pure strict liability can induce efficient care-taking when both injurers and victims can sue. Leong does not mention either of these liability rules in his brief discussion of efficient liability rules in the bilateral risk/bilateral law suit context.
I. THE MODEL

In order to emphasize the importance of Leong's assumption that victims are immune from suit, the model employed here is based as closely as possible on the one used by Leong. In particular, to facilitate comparison with Leong's article, Leong's use of the terms "injurers" and "victims" to distinguish between the two types of parties to an accident is retained, notwithstanding the fact that the distinction is potentially misleading since both "injurers" and "victims" are injured in any accident. Although imprecise, a valid distinction nevertheless can be made between those deemed "injurers" and those referred to as "victims": the "injurers" are those people engaged in the activity that we normally think of as producing the harm whereas the "victims" are those whose activity is relatively passive. For example, in a motorist/pedestrian accident the motorist is regarded here as the "injurer" and the pedestrian as the "victim."

Following Leong, it is assumed that the world is composed of a fixed number of risk-neutral individuals. As discussed above, these individuals are divided into two types: injurers and victims. All injurers are identical, as are all victims. Each accident involves one injurer and one victim. Both the probability of an accident between any injurer-victim pair, and the severity of the injury, is affected by level of care taken by both the injurer and the victim. Should an accident occur, both the victim and the injurer suffer a loss; it is assumed that only replaceable commodities are injured.8

Thus we define \( I(x,y) \) as the expected cost to an injurer taking care level \( x \) of being in an accident with a victim who is taking care level \( y \). \( V(x,y) \) is the expected cost to a victim taking care level \( y \) of being in an accident with an injurer who is taking care level \( x \). The individuals' activity levels do not affect expected accident costs.9

It is further assumed that all parties and the courts possess perfect information. In addition, it is assumed that the due care standard for both negligence and contributory negligence is set at the efficient level of care and that damage awards fully compensate plaintiffs for their losses.

II. THE ANALYSIS

The social goal is to maximize total social wealth by minimizing total accident costs. As injurers are identical, and victims are identical, this goal is achieved when injurers and victims take the levels of care, \( x \) and \( y \), that minimize the total accident costs of any pair of injurers and victims:

\[
x + y + I(x,y) + V(x,y)
\]

The levels of care that minimize Equation 1 are the levels \( x^* \) and \( y^* \) that satisfy Equations 2 and 3:

\[
1 + I_x(x,y) + V_x(x,y) = 0
\]

\[
1 + I_y(x,y) + V_y(x,y) = 0
\]


9For a discussion of efficient tort law where the individuals' activity levels do affect the probability and/or severity of an accident, see Shavell, "Strict Liability Versus Negligence," supra note 2; see also Brian Hindley and Bill Bishop, "Accident Liability Rules and Externalities," 3 Intern'l Rev. L. & Econ. 59 (1983).
Consider now whether efficient care-taking will occur in the absence of liability rules. In the absence of liability rules, in equilibrium each injurer will take the care level, $x^*$, that satisfies Equation 4

$$1 + I_i(x,y) = 0 \tag{4}$$

when $y$ is such that Equation 5 is satisfied:

$$1 + V_j(x,y) = 0 \tag{5}$$

Victims will take care level $y^*$ that satisfies Equation 5 when $x$ is such that Equation 4 is satisfied. The resulting equilibrium will occur at care levels $x^*$, $y^*$—both of which are less than the efficient levels of care, $x^*$, $y^*$. In the absence of liability rules, therefore, care-taking is not efficient. The question thus arises, whether efficient care-taking can be induced by a system of liability rules.

**A. Pure strict liability**

Leong concluded that under pure strict liability the victim has no incentive to take any care because he will be fully reimbursed by the injurer for all losses. Injurers, Leong found, will bear all losses and thus will take the efficient level of care.\(^9\)

Leong’s conclusions that the victim takes no care and the injurer takes the efficient level of care do not hold once his model is expanded to allow injurers to sue victims. Now under pure strict liability victims do not pay for their own losses but do pay for the losses suffered by injurers. Thus each victim will select the care level $y'$ that satisfies Equation 6:

$$1 + I_j(x,y) = 0 \tag{6}$$
given the injurer’s level of care. Each injurer in turn will select the level of care $x$ that satisfies Equation 7:

$$1 + V_i(x,y) = 0 \tag{7}$$
given the victim’s level of care. Comparing Equations 6 and 7 with Equations 2 and 3, we see that under pure strict liability in equilibrium both parties take positive levels of care but neither party takes the efficient level of care.\(^11\)

**B. Strict liability with contributory negligence**

Leong concluded that strict liability with contributory negligence induces efficient care-taking by the injurer but does not necessarily induce efficient care-taking by the victim. In particular, Leong found that under strict liability with contributory negligence the victim will not take efficient care if, when the injurer takes the efficient level of care, $x^*$, the victim’s total expected accident costs, should he take due care, $y^*$, exceeds his total


\(^11\)Observe that here, unlike in the case of single activity accidents, the equilibrium that will result under a pure strict liability rule is *not* equal to the equilibrium that will result in the absence of liability rules. *See* Peter Diamond, "Single Activity Accidents," *3 Journal of Legal Studies* 107, 117 (1974) (showing that, where accident costs are symmetric, pure strict liability results in parties taking the no-liability uniform equilibrium level of care).
expected accident costs should he fail to take due care—where the latter is given by $y^{oo} + V(x^*, y^{oo})$, where $y^{oo}$ is the $y$ that minimizes $y + V(x^*, y)$.

Once the possibility that the injurer will sue the victim is incorporated into the model, however, the situation changes radically. Now a victim who expects the injurer to take due care will take due care himself if $y^* + I(x^*, y^*)$ is less than $y + I(x^*, y) + V(x^*, y)$. Equation 3, however, implies that $y^*$ equals $y^*$. Thus, a victim always will take due care, $y^*$, if he expects the injurer to take due care. Similarly, because $x + I(x, y^*) + V(x, y^*)$ is minimized at $x^*$, an injurer who expects the victim to take due care will himself take due care. Strict liability with contributory negligence thus induces efficient care-taking by both parties so long as each assumes the other is taking due care.

What if each party expects the other to be negligent? In this case the victim’s expected accident costs are $y^*$ if he takes due care and the injurer does not and $y^o + V(x^o, y^o)$ if neither party takes due care. The injurer’s costs are $x^*$ if he takes due care and the victim does not and $x^o + I(x^o, y^o)$ if they both fail to take due care. For an equilibrium to occur with both parties being negligent it must be the case that for both parties it is better to be negligent than to take due care. In other words, both parties will be negligent only if:

$$x^* + y^* > x^o + y^o + V(x^o, y^o) + I(x^o, y^o).$$

The definition of efficient care-taking, however, implies that

$$x^* + y^* + V(x^*, y^*) + I(x^*, y^*) < x^o + y^o + V(x^o, y^o) + I(x^o, y^o).$$

Since both $V(x^*, y^*)$ and $I(x^*, y^*)$ are non-negative, Equation 9 implies that Equation 8 is never satisfied. Thus, strict liability with contributory negligence is efficient.

C. Pure negligence

Examining the pure negligence rule, Leong concluded that the pure negligence rule will not necessarily induce injurers to take the efficient level of care, even when due care is

14Leong, supra note 1, p. 109.

15See Equation 2, supra.

16If neither party takes due care, each party’s expected accident costs are identical to expected accident costs in the absence of liability rules. Thus in equilibrium, each party will take the no-liability equilibrium level of care.

17Where it is better for one party to be negligent, but not for the other, inefficiency will not result. For, in this case, the negligent party will revise his expectations to incorporate the fact that the other party is taking due care; it has already been established that a party who expects the other to take due care will take due care himself.

18Both parties will be negligent only if:

$$y^* > y^o + V(x^o, y^o)$$

and

$$x^* > x^o + I(x^o, y^o).$$

For these two equations to hold it must be the case that

$$x^* + y^* > x^o + y^o + I(x^o, y^o) + V(x^o, y^o).$$
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equal to the efficient level of care. Victims, he determined, invariably will take insufficient care. This conclusion does not hold, however, when injurers as well as victims can avail themselves of the tort system. In this situation, the injurer’s expected accident costs under a pure negligence rule are $x^* + \mathcal{I}(x^*,y^*)$ should he and the victim each take due care and $\hat{x} + \mathcal{I}(\hat{x},y^*) + \mathcal{V}(\hat{x},y^*)$ if the victim takes due care and the injurer does not, where $\hat{x}$ is the $x$ that minimizes $x + \mathcal{I}(x,y^*) + \mathcal{V}(x,y^*)$. But, Equation 2 reveals that $\hat{x}$ equals $x^*$. Thus, an injurer who expects the victim to take due care will himself take due care. Similar analysis shows that a victim who expects the injurer to take due care will himself take due care.

As before, in order to ensure efficiency it must also be the case that an injurer and a victim will not both decide to be negligent should each think that the other is being negligent. Under a pure negligence rule this condition is satisfied: the parties will not both choose to be negligent because, as established above, it is never the case that $x^* + y^* < x^" + y^" + \mathcal{V}(x^",y^") + \mathcal{I}(x^",y^")$. Therefore, in contrast with Leong’s results, and in contrast with the conclusion reached by Diamond in the single activity context, here the pure negligence rule induces efficient care-taking by both potential parties to an accident.

D. Negligence with contributory negligence

According to Leong, negligence with contributory negligence leads to the identical result as pure negligence: the injurer will take the efficient level of care, $x^*$, but the victim, who bears his own, but not the injurer’s losses, takes the level of care that minimizes $y + \mathcal{V}(x^*,y)$.

Leong is correct that pure negligence and negligence with contributory negligence lead to the identical result, but he is incorrect in his conclusion that this result is inefficient. As in the case of pure negligence, under a negligence with contributory negligence rule, a victim who believes the injurer is taking due care will himself always choose to take due care. Similarly, an injurer who expects that the victim is taking due care will himself take due care. Moreover, the efficient equilibrium is guaranteed because, in a world of perfect information, it will never be the case that an injurer and a victim will both choose to be negligent.

17Leong, supra note 1, p. 109.
18See Equations 8 and 9, supra.
19Diamond, Single Activity Accidents, supra note 11, p. 117.
20Leong, supra note 1, p. 109.
21Under negligence with contributory negligence a victim who believes the injurer is taking due care will fail to take due care only if:

$$y^* > \hat{y} + \mathcal{I}(x^*,\hat{y}) + \mathcal{V}(x^*,\hat{y})$$

where $\hat{y}$ is the $y$ that minimizes $y + \mathcal{I}(x^*,y) + \mathcal{V}(x^*,y)$.

But Equation (3) implies that the right hand side is minimized at $y^*$. The victim therefore will also take due care.

22Once again, both the injurer and the victim will be negligent only if:

$$x^* > x^" + \mathcal{I}(x^",y^")$$

and

$$y^* > y^" + \mathcal{V}(x^",y^")$$

Equations 8 and 9 imply that these two conditions will never be met.
CONCLUSION

The question of what are efficient tort liability rules when both parties to an accident may suffer losses is an important one. Many everyday torts result from bilateral-risk activities. This comment has shown that in the case of perfectly informed, risk-neutral individuals who suffer replaceable losses, the three negligence-inclusive liability rules (pure negligence, negligence with contributory negligence, and strict liability with contributory negligence) all induce efficient care-taking by both injurers and victims.

This conclusion that the three negligence-inclusive liability rules are efficient conflicts with those of Leong. The divergence between Leong’s results and those presented here springs from Leong’s assumption that, although victims can sue injurers, injurers cannot sue victims. The fact that in Leong’s model, efficiency is not generally attainable, but it is attainable here, suggests that the validity of various artificial impediments to lawsuits, such as parental and sovereign immunity, should be re-examined.

The results obtained in this comment also conflict with Diamond’s analysis of a particular class of bilateral-risk activities: single activity accidents. For, although Diamond concluded that negligence with contributory negligence is efficient, he suggested that pure negligence is not efficient. This comment has shown, however, that pure negligence is efficient in the bilateral-risk context and thus suggests that the issue of the efficiency of the negligence-inclusive liability rules in the single activity accident context should be re-examined.

Automobile accidents are an example of everyday accidents resulting from bilateral-risk activities. Peter Huber estimates that traffic accident claims account for approximately 40 percent of all tort cases. Peter Huber, Liability: The Legal Revolution and Its Consequences (New York: Basic Books, 1988).

Throughout this comment it was assumed that the same liability rule governs the activities of both the injurers and the victims. This is not always the case: there will be circumstances where the activity engaged in by one party is governed by a strict liability rule whereas that of the other is governed by a negligence rule with contributory negligence rule. Given this, the issue presents itself as to whether the three negligence-inclusive liability rules are efficient in those circumstances where the activities of the injurers and the victims are governed by different liability rules. It appears that the three negligence-inclusive liability rules are in fact efficient in those circumstances, provided that the injurer’s and victim’s activities are each governed by one of the negligence-inclusive liability rules.

See Diamond, Single Activity Accidents, supra note 11, p. 117.