Tort Law – Suggested Answers

1 SHORT ANSWER QUESTIONS

Comment on the Following:

1. [2002, Midterm #2a] Suppose that all doctors were held strictly liable for injuries they cause to their patients. What are the consequences using this liability rule instead of a negligence rule?

A A strict liability rule may be more administratively costly since it would induce more cases; however, each case will be much easier since you don't need to ascertain whether the doctor has met their standard of care.

2. [2002, Midterm #2b] A negligence rule would be more efficient if it imposed a standard of care on both the victim and the injurer. True or false.


3. [1999, Final Exam] In many places, a bartender, friend, party host, or other person who serves liquor to an already intoxicated person is held vicariously liable for any damages that person subsequently inflicts on other people or their property. Does this form of vicarious liability make economic sense?

A Suggested answer to question 9.6 on page 513 of 3rd edition of textbook:

We saw in Chapter 7 that contract law treats a person who is drunk as incapacitated, so that a promise that a drunk makes in unenforceable. Similarly, tort law recognizes that a drunk is no longer capable of making reasonable decisions about precaution although his condition creates a high probability of causing harm. One way to reduce this probability or to make accidents involving drunks less severe is to make sober people responsible for the drunk’s actions. As between the drunk and the bartender or social host, there is now a situation of what we have called unilateral precaution: only the sober bartender can guide the drunk into taking adequate precaution. It is worth thinking about whether the bartender or social host should bear complete or only partial liability for the drunk’s action. Are social hosts more likely to help if liability is shared with the drunk? Will helpers avoid drunks if they realize they become fully responsible for the drunk’s action? If so, can this effect be reduced by applying comparative fault principles to the helper?

4. [1999, Final Exam] What is the role of product liability in determining what precautionary decisions are made by a potential injurer? What would be the consequences of limiting the compensatory damages that a victim may receive?
A Product liability encourages manufacturers to take appropriate precautions to prevent defects in design, defects in manufacture as well as defects in warning consumers about potential dangers. The argument for limiting damages was the juries have been too generous to plaintiffs. Sometimes, however, these limits can have opposite results – see the discussion of medical malpractice limits in Indiana on page 381 (page 359 of 3rd edition).

5. [Makeup exam] Suppose I own and enjoy a backyard fireplace. My neighbour is allergic to the smoke. She takes me to court and asks for the fireplace to be destroyed. How should the court rule? What is important for efficient resolution of this matter?

A Coase Theorem – if transaction costs are low, the ruling of the court will not affect the final allocation of the rights. Beyond this, what matters is the relative valuations of the two parties.

6. [2001, Midterm #2] a. Offer an economic explanation for why the owner of a dog is liable for the harm it causes due to his negligence, whereas the owner of a tiger is strictly liable for any harm that it causes.

A There are a variety of possibilities here. For example, you could argue injuries caused by a tiger will be much more severe in nature and therefore the owner as the person in the best position to prevent these kinds of injuries should be held strictly liable – that is, the most efficient level of care is one that results in no injuries. On the other hand, the likelihood is that an injury caused by a dog will be much less severe and therefore the most efficient level of precaution is something less than no injuries suggesting that negligence is the most efficient legal rule.

b. Would the efficiency of a rule of simple negligence increase by imposing a standard of care on victims?

A No. Simple negligence is sufficient to provide incentives for efficient bilateral precaution. See also question 2 above.

2 PROBLEMS

1. [2002, Midterm #2a]

a. Consider a situation in which both the victim and injurer can undertake some precaution to prevent the accident. Describe two different liability rules that result in efficient levels of precaution. Explain how each of these rules work to achieve efficiency.

A (page 325-6 of 4th edition or 304-11 or 3rd edition) Any of the forms of negligence rules will do the trick. For example simple negligence: assuming
that the legal standard of care is set at the efficient level of precaution for the potential injurer, the injurer will have an incentive to minimize costs by taking the minimum amount of precaution that is sufficient to avoid liability. This has to be the minimum cost level of precaution to the potential injurer because they will only ever incur the expenses of precaution and not the liability costs if the injury actually occurs. Given this, the victim will act as if there is a no liability rule because the potential injurer will never be liable. The victim will therefore also take the efficient level of precaution to minimize the expected costs in light of the possibility of an accident. Other rules that work include negligence with a defence of contributory negligence, comparative negligence and strict liability with a defence of contributory negligence. See pages 328-332 (or 308-11 or 3rd edition) for a discussion of these rules.

b. When might one of these rules be preferred to the other? Describe in detail.

A Different negligence rules give rise to different residual risk bearers. Activity levels (page 332): give the residual bearer of harm to the party who is the least cost residual risk bearer (who can more easily reduce their activity levels). Also, there may be errors or informational problems which may make it easier for one of the parties or for the court to figure out the 'efficient' standard and/or it may be easier for the court to verify the standard is satisfied for one of the parties.

2. [2002, Midterm #2b] Consider the problem of a person who drives a tank (somewhat recklessly). The tank driver likes to go quickly, but knows that the probability of running off the road and ruining people's front yards is higher when he drives more quickly. This probability of damage is equal to .01*s where s is the speed he drives. The marginal change in the probability is -.01 for each mile per hour faster he drives. His tank can go any speed between 0 and 50 miles per hour. His marginal utility associated with speed s is 5*s. The total harm he causes to someone's garden when he has an accident is 10,000.

a. With no liability rule, how quickly (i.e., what speed) will the tank driver choose to drive?

A 50 miles

b. With a strict liability rule, how quickly will the tank driver choose to drive?

A The tank driver will internalize the costs to potential victims and so will choose a speed such that MB=MC. So, 5s=.01*10,000, implying s=20.

c. Are the answers in a and b different? If so, why?

A Yes. Strict liability gives an incentive to fully internalize the costs imposed on others.
d. Suppose now that instead of running over people's gardens the tank driver sometimes hits another motorist. This other motorist is like the tank driver (a fast, somewhat reckless driver). What are the consequences for efficiency of a no liability rule? a strict liability rule?

A Neither rule is efficient. No liability doesn't induce precaution by the tank driver. Strict liability doesn't induce precaution by the other motorist. For bilateral precaution, one of the negligence rules is required for efficient incentives (see pages 326-333 of 4th edition or 306-312 of the 3rd).

e. With a second motorist, is there a liability rule that will result in both drivers choosing efficient speeds? Explain.


3. [1999, Final Exam] Suppose there are two people who live next door to each other. One of them (person A) smokes cigars. Person B dislikes the smell of cigar smoke. Person A claims that he has the right to smoke on their property. Person B claims that he has the right to live free of smoke. They ask the court to clarify the allocation of their property rights. They know that the following table contains all of the information about their relationship. Person A can smoke at most 6 cigars a day.

<table>
<thead>
<tr>
<th>Number of Cigars smoked</th>
<th>Marginal Benefit to A of smoking another cigar</th>
<th>Marginal Cost to B of A smoking another cigar</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1000</td>
<td>100</td>
</tr>
<tr>
<td>1</td>
<td>700</td>
<td>400</td>
</tr>
<tr>
<td>2</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>3</td>
<td>300</td>
<td>600</td>
</tr>
<tr>
<td>4</td>
<td>200</td>
<td>700</td>
</tr>
<tr>
<td>5</td>
<td>100</td>
<td>800</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Sketch the marginal benefit and cost curves. Clearly label.

b. How many cigars is it efficient for person A to smoke?

A MB = MC at 3 cigars. (note that the values are MB and MC of A smoking an additional cigar. So the MB and MC of A increasing the number of cigars smoked from 2 to 3 is 500).

c. How should the court rule? Clearly show the consequences of ruling for either person A or B. (Assume that any bargaining that takes place is Nash Bargaining.) What affects do these rules have for the amount of smoke and the distribution of income?
A Coase theorem suggests that so long as transaction costs are zero, negotiation will give rise to the efficient allocation of rights regardless of how the court rules. Only the distribution of income will be affected by the court’s ruling. If the court rules for A, B will have to pay A to reduce the number of cigars he smokes. The least that A will accept to reduce his consumption to 3 cigars is $600 and the most B will be willing to pay is $2100. The Nash bargaining solution is $600 + \frac{1}{2}(2100-600) = $1350 paid to A by B. If the court rules for B, A will have to pay B to acquire the right to smoke some cigars. B will be willing to accept anything over $1000 to allow A to smoke 3 cigars and B will be willing to pay up to $2200 to smoke 3 cigars. Nash bargaining solution is $1000 + \frac{1}{2}(2200-1000) = $1600 paid to B. Either way the negotiation will give rise to A smoking 3 cigars, but the distribution of wealth will be affected.

d. Suppose there are transactions costs associated with bargaining. At what level of transactions cost would you change your answer in the above question (c)?

A If transactions costs wipe out the surplus that could be gained from bargaining, then the ruling by the court will matter. That is, if transaction costs are greater than $1200 but less than $1500 then if the court rules for B the final allocation will not be efficient; on the other hand if the court rules for A the final allocation will still be efficient. If the transaction costs are greater than $1500, the final allocation will not be efficient unless the court rules that A can smoke 3 cigars.

e. Suppose now costs are above this level found in (d). How should the court rule?

4. [2000, Midterm Exam] Suppose that there are two apartment dwellers. They share a thin wall between their dwellings. The first apartment dweller (Adam) values being able to sleep in absolute silence at $120. The second apartment dweller (Brad) values throwing loud parties at $200.

a. What is the efficient outcome? (Should there be parties?)

A Since Brad values throwing parties more than Adam values sleeping in silence ($200 > $120), the efficient outcome is that Brad should be allowed to throw parties.

b. Assume that if they negotiate they will use the Nash Bargaining.

i. Suppose that Adam is allocated property rights. Will there be any room for negotiation? If yes, what will be the outcome?

A In this case there is room for negotiation since Brad could offer something between $120 and $200 to Adam for the right to throw parties. Nash bargaining solution is $120 + \frac{1}{2}(200-120) = $160 paid by Brad to Adam for this right.
ii. Suppose that Brad is allocated property rights. Will there be any room for negotiation? If yes, what will be the outcome?

A In this case there is no room for negotiation since this is the efficient outcome (i.e., there is no surplus available through negotiation).

c. Does this illustrate that as long as people can bargain (with no transaction costs) the allocation of property rights does not matter for the final allocation or the distribution of incomes?

A Clearly the final allocation of the rights is independent of the ruling of the court, but the distribution of income will depend on the ruling. This is the Coase theorem.

5. [2001, Midterm #2] When considering cases of injury, should courts use a simple negligence rule or a rule of strict liability with contributory negligence? When does the rule make a difference?

Comment on the effect of each rule on:

a. Levels of precaution (how much precaution people use when engaging in the potentially dangerous activity)

A Either rule will provide incentives for efficient by-lateral precaution. See the third paragraph on page 330 (second paragraph on page 310 of 3rd edition).

b. Activity levels (how much of the potentially dangerous activity people do)

A Under a rule of simple negligence, the residual risk bearer is the victim and therefore they will have an incentive choose the efficient activity level. In contrast, strict liability with contributory negligence leaves the residual risk on the injurer and so they will have efficient incentives to choose the appropriate activity levels. In either case the other party does not have efficient incentives in choosing activity levels.

c. Uncertainty about legal standards

A Under simple negligence if the injurer is uncertain about the legal standard that the court will impose, they will tend to take higher levels of precaution to avoid the positive probability of being held liable. Under strict liability with a defence of contributory negligence, if the victim is uncertain about the relevant legal standard, they will take greater precautions in order to ensure that the injurer will be held liable.

d. Uncertainty about damages

A (Page 340 of 4th edition or page 319 of the 3rd) If the errors in damages (either by the court or by the injurer are purely random victims and injurers
will still choose the efficient levels of precaution under either rule because expected liability remains unchanged since errors of excess offset errors of deficiency on average. See table 8.3 on page 340 (319) for the effects of other more systematic errors.

e. Uncertainty (by one party or both parties) about the possibility or risk of injury

Uncertainty by one or both parties about the possibility of injury will not affect levels of precaution under either rule. The uncertainty will not affect the expected cost function for either victim or injurer.

f. Suppose that injurer is risk averse and the victim is risk neutral. Does this change your answer?

6. Suppose that there are two apartment dwellers. They share a thin wall between their dwellings. The first apartment dweller (Adam) values being able to sleep in silence. The second apartment dweller (Brad) values throwing loud parties.

<table>
<thead>
<tr>
<th>Noise Level</th>
<th>Cost to B of reducing noise</th>
<th>Benefit to A of noise reductions</th>
<th>Total Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Marginal</td>
<td>Total</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
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<td>2</td>
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<td>2</td>
<td>10</td>
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</tr>
<tr>
<td>0</td>
<td>192</td>
<td></td>
<td>360</td>
</tr>
</tbody>
</table>

a. Fill in the table for its missing values (indicated by ***).

See table.

b. What is the efficient outcome?

A noise level of 3 would be the efficient outcome (where MC=MB and the surplus is the greatest).
c. Suppose there are no transaction costs (T=0). How should a court motivated by efficiency rule in this case? Carefully and explicitly consider any post ruling bargaining that would take place.

A Coase theorem suggests that the final allocation is independent of the ruling of the court. If the court rules for B, A will negotiate with B and pay B for reducing the noise level to 3. On the other hand, if the court rules for A, B will negotiate with A and pay A for the right to increase the noise level.

d. Does the answer to (c) imply that A is indifferent between the rulings of the court? Why/why not?

A The distribution of income will be different depending on the ruling of the court. Clearly A would prefer that the ruling of the court be in her favour since then she would be able to bargain with B and receive a payment for allowing the noise level to increase.

e. Suppose transaction costs T=200. How should the court rule? Is this different than in (c)? Why/why not?

A This should not change the answer from part c. Since the surplus net of transaction costs is still positive, negotiation should still occur regardless of how the court rules.

f. Suppose T=200. Suppose the court is choosing between ruling for a noise level of 6 or 8. Which should it choose and why?

A The total surplus is higher at a noise level of 6 rather than 8 and since that surplus is less than 200, negotiation would be unsuccessful in reducing the noise level from 8 to 6 (although if there were no additional transaction costs to negotiating a reduction to 3, that would be the likely outcome), the court should rule for a noise level of 6 (thereby achieving the more efficient result without the need to incur transaction costs).