Economics 522: Law and Economics **Email: jebecker3@wisc.edu**
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Handout #3: Property Law Basics

Review

1. Preliminaries:

- Property is often thought of in terms of physical possessions, but for this class we often adopt a wider view of property as a "bundle of rights," or a set of entitlements.
- One difficulty that plagues many discussions of efficiency in legal outcomes is nonmonetizability, the inability of parties in a dispute to assign monetary values to outcomes.

2. Types of transaction costs:

(a) Search Costs: Difficulties in finding a trading partner.

(b) Enforcement Costs: Difficulties in enforcing the agreement afterwards.

(c) Bargaining Costs: Difficulties in reaching an agreement.

- Asymmetric information/adverse selection
- Private information/not knowing each others' threat points
- Uncertainty about property rights/threat points
- Large numbers of buyers/sellers – holdout, freeriding
- Hostility

3. Approaches to Property Law:

(a) Normative Coase: Structure the law to minimize transaction costs.

- Optimal when transaction costs can be made low enough to lubricate bargaining, or when the costs to the regulatory body of obtaining information are high.

(b) Normative Hobbes: Structure the law to allocate property rights to whoever values them the most.

- Optimal when transaction costs can not be made low enough to lubricate bargaining, or when the costs to the regulatory body of obtaining information are low.

4. Rules for Protecting an Entitlement:

(a) Property Rule: No one can take the entitlement to private property from the holder unless the holder sells it willingly and at the price at which she subjectively values it.

- When transaction costs are low, a property rule is more efficient.
- Remedy: Injunctive relief enforcing the property right (often under threat of punishment).

(b) Liability Rule: An external, objective standard of value is used to facilitate the transfer of the entitlement from the holder to the nuisance.

- When transaction costs are high, a liability rule is more efficient.
- Remedy: Compensatory damages approximating the harm.

(c) Inalienability: Barring the transfer of entitlements.

- Inalienability is often considered an inefficient rule because it may prevent mutually beneficial trades.
- Inalienability is often used when the following are present:

- **Allocative Externalities:** When non-bargaining parties have a stake in the outcome.
- **Indirect Externalities:** When complementary markets are affected by the trades in another market.
- **Paternalism:** Regulating conduct if people aren't trusted to make optimal decisions.
- **Repugnant Markets:** Transactions that some people would like to make, but to which other people object, even though they may not be directly harmed.

- Notice that the first three reasons are actually reasons which can be expressed while still adhering to the efficiency norm.

Note: These three protections are not mutually-exclusive. Calabresi and Melamed note:

"It should be clear that most entitlements to most goods are mixed. Taney's house may be protected by a property rule in situations where Marshall wishes to purchase it, by a liability rule where the government decides to take it by eminent domain, and by a rule of inalienability in situations where Taney is drunk or incompetent."

Problems

1. Adam is a heavy smoker. His utility is a function of the number of cigarettes (X) he smokes and the amount of money (m) he has:

$$U_A = 36X - 2X^2 + m_A.$$

The costs of cigarettes are: $C(X) = X^2$.

Bob, who is Adam's roommate, detests smoking. His utility is a decreasing function in the number of cigarettes Adam smokes:

$$U_B = 128 - X^2 + m_B.$$

Assume that Adam and Bob each starts with a sufficiently large amount of money M, such that their budget constraints never bind.

From last week's discussion section, we know that the efficient outcome is $X = 4.5$.

	Adam has property rights, Bob attempts bargaining	Bob has property rights, Adam attempts bargaining
Pre-bargaining outcome	X = 6	
After-bargaining outcome	$X = 4.5$	
Threat point for Adam	$U_A\,(X = 6) = 108 + M_A$	
Threat point for Bob	$U_B\,(X = 6) = 92 + M_B$	
After bargaining utility, Adam	$U_A\,(X = 4.5,\ S) = 101.25 + M_A + S$	
After bargaining utility, Bob	$U_B\,(X = 4.5,\ -S) = 107.75 + M_B - S$	
Possible range for transfers	$6.75 < S < 15.75$	
If surplus split evenly	$S = 11.25$. $U_A = 112.5 + M_A$. $U_B = 96.5 + M_B$.	

   (a) (Review) What happens when Bob has the property rights, and there is no impediment to bargaining? Fill in the blanks.

   (b) Who should have property rights to the apartment according to the "normative Coase approach"? Who should have property rights to the apartment per the "normative Hobbes approach"?

   (c) Bob sues Adam at the court. The judge could give out one of the three rulings: injunction relief, damages, or ruling in favor of Adam.

      (i) Suppose that Adam and Bob can negotiate. Which ruling is efficient? What happens under each ruling scenario? How large will the money transfers be? (Assuming that all surpluses are evenly split)

      (ii) Suppose that Adam and Bob refuse to talk to each other and will simply carry out the court rulings. Which ruling is then more efficient?

   (d) Under the following scenarios, which ruling is more efficient? Injunction or damages?

      (i) Enacting an injunction costs 20 to taxpayers. Enacting the damages costs 40 to taxpayers. There are no transaction costs, and bargaining is possible.

      (ii) Enacting an injunction costs 20 to taxpayers. Enacting the damages costs 40 to taxpayers. Bargaining generates a cost of 40, which is shared by Adam and Bob.

2. (From Handout 2) Suppose that a company plans to build a high-speed rail system to connect two major cities. The company estimates that the completed rail system can generate total revenues of 1 billion dollars. The company begins purchasing all the land between the two cities, with expenditures totaling 750 million dollars. As the company is about to lay the last stretch of rail, they get word that the final piece of rail will pass through a previously-overlooked plot of land belonging to a far-off, urban dwelling millennial who values the land at one dollar.

   (a) Suppose the law protects the right to private property. What are the threat points for both parties in this example?

   (b) Do you expect bargaining to lead to an efficient outcome (the party who values the land most getting it)?

   (c) Suppose bargaining would lead to a share β of the gains from cooperation going to the millennial, and a share $1 - \beta$ going to the company (Where $0 < \beta < 1$). For what values of β is the company better off than before they began the project?

   (d) If this case went before a court, and the court was responsible for designing efficient laws for similar future scenarios (or establish a precedent which will lead to economic efficiency), what types of issues might the court consider?

   (e) How might the Normative Coase and Normative Hobbes perspectives differ here? Which do you anticipate would be better for the court to adopt?

(f) Do you think a Property Rule or a Liability Rule would make more sense in this scenario? (Hint: Think about the difficulty in determining the amount to be paid to the millennial vs. the inefficiencies of private bargaining when there is a large sum at stake.)

3. (From Sample Exam Questions) In many cities, including Madison, homeowners are responsible for shoveling the sidewalk in front of their house, and can be fined if they do not. My next-door neighbor and I are the same age, equally fit, have equal-sized sidewalks, and value our time about the same. However, after each snowfall, he clears the sidewalk in front of his house with a shovel, and I clear the sidewalk in front of my house with a brand-new, extremely powerful snowblower. Clearing the sidewalk takes me five minutes, and takes him an hour. And I won't lend him my snowblower, because it takes a while to learn how to use it properly and I'm afraid he'd break it.

   (a) If our goal is efficiency, who should clear my neighbor's sidewalk?

   (b) Define the Normative Coase view of how property law should be designed. Under this view, who would end up clearing my neighbor's sidewalk, and why?

   Sensing a problem, our neighborhood association proposes a regulation which would require whoever has the newest, most powerful snowblower on each block to clear the sidewalk for the entire block.

   (c) Consider the two rules – the old rule where each homeowner is responsible for his part of the sidewalk, and the new rule where the one with the best snowblower is responsible for the whole block. In the short run – say, for the first week after the neighborhood association meeting – which rule (if either) would be more efficient if transaction costs are low? What if transaction costs are high?

   (d) In the longer term – say, over the course of years – which rule would lead to people owning more advanced snow clearing equipment? Which rule would be more efficient in the long run?