ECON 522 - SECTION 3 - PROPERTY LAW REMEDIES AND INTELLECTUAL PROPERTY

I. Property Law Remedies In lecture we've looked at three types of remedies for property disputes: injunctions, damages, and inalienability.

- **Injunctions:** Complete and tradable property rights.
  - If someone is granted an injunction then they are assigned the property right and can trade it if they wish. For example, if a homeowner is given an injunctive right to stop a neighbor from breeding noisy roosters, then the homeowner can either exercise this right, or sell it to the neighbor who wants to raise roosters.
- **Damages:** The right to buy a property right at a set price.
  - Think of damages as setting a price for a property right and then allowing someone to purchase that right if they wish. For example, suppose the neighbor in the previous example (the one raising roosters) is forced to pay damages in the amount of $500 if he chooses to keep the birds on his property. Then the option for the neighbor is either (i) don't raise roosters but don't pay $500, or (ii) buy the right to raise roosters for $500.[1]
- **Inalienability:** Non-tradable property right.
  - An inalienable property right cannot be traded legally in the market. The existence of such property violates the conditions necessary for the Coase Theorem to work, but there may be reasons society would want to bar certain trades.

I.1 Example: Raising Roosters. In Madison it is legal to own hens in residential neighborhoods, but it is not legal to own roosters. The reason that roosters are not allowed is that they create much more of a negative externality than hens do: Hens are relatively quiet and can provide families with eggs and meat, while roosters tend to be extremely loud, even at night, while they do not provide as much a benefit for families (no eggs).[2] Suppose there are two neighbors, Roger and Joe. Roger wants to raise roosters instead of hens, and this right is worth $700 to him. Joe is the only neighbor who would be affected by Roger's roosters, and he values a rooster free neighborhood at $300. However, if Roger builds a sturdy coop to keep the roosters in then Joe's payoff is only $100 less than if there were no roosters at all. Let the initial allocation be that there are no roosters and no coop. Let Joe's initial payoff be $300 and Roger's be $0.

1. Suppose a coop costs Roger $50 to build. What is the efficient allocation of rights?
2. Suppose the law is such that Joe has an injunctive right over Roger's ability to own roosters. If the two neighbors negotiate and decide to split any potential gains evenly, what would the final allocation and payoffs be (Assume that if the coop is built, then Roger pays for it)?
3. Suppose Roger can raise roosters if he pays Joe one time damages of $300 if he does not have a coop, and $100 if he does have a coop. What would the neighbors choose to do and what would the final allocation and payoffs be?

[1] This is assuming the damages are permanent damages, which means the neighbor would not have to pay further fees in the future.

[2] Also, roosters are used in cockfighting, which is not legal. Allowing roosters to be bred openly would lower the cost of cockfighting, and thus increase its prevalence.

4. Suppose Joe has an inalienable right to a roosterless neighborhood. What would the neighbors choose to do and what would the final allocation and payoffs be?

Answers:

1. Since Roger's value for owning roosters is greater than Joe's value for there being no roosters, Roger should have roosters. Also, since building a coop costs society \$50 but is worth \$200 to Joe (relative to roosters with no coop), there should be a coop. Thus the efficient allocation is for Roger to raise roosters and keep them in a sturdy coop.

2. Currently in the economy there is \$300 in total wealth:

   $$\text{Joe's payoff } + \text{ Roger's payoff } = \$300 + \$0 = \$300$$

   If Roger has the right to raise roosters and builds a coop, then the total social wealth would be \$850:

   $$\text{Joe's payoff } + \text{ Roger's payoff } = \$200 + \$700 - \$50 = \$850$$

   Thus the gains from trade are \$550, and if they split the gains then they should each get $\frac{1}{2}(550) = \$275$ more than their initial payoffs (i.e. their threat points). Thus Joe gets $\$300 + \$275 = \$575$, and Roger gets $\$0 + \$275 = \$275$. This can be achieved by Roger buying the right to raise roosters in a coop for a price $p = \$375$. The sale would be conditional on Roger building a coop. Here's how to see this all works out:

   $$\text{Joe's payoff } = \$575 = (\text{value when roosters are present in a coop}) + p = \$200 + \$375 = \$575$$
   $$\text{Roger's payoff } = \$375 = (\text{value for raising roosters}) - (\text{cost of coop}) - p = \$700 - \$50 - \$375 = \$275$$

3. Roger will choose to build a coop and pay damages of \$100. To see this, note that Roger has three options:

   (a) Do not get any roosters: Payoff=\$0

   (b) Get roosters but do not build a coop: Payoff=\$700-\$300=\$400

   (c) Get roosters and build a coop: Payoff=\$700-\$100-\$50=\$550

   Thus Roger will pay damages of \$100 to Joe. Thus Joe's payoff is \$300:

   $$\text{Joe's payoff } = (\text{value when roosters are present in a coop}) + D = \$200 + \$100 = \$300$$

   Therefore we reach the efficient allocation, with total social wealth \$300+\$550=\$850

4. If the right is inalienable then Joe cannot sell the right to Roger. Thus the allocation remains the initial allocation, no roosters, and payoffs are \$300 for Joe and \$0 for Roger.

Things to Note.
(A) Joe prefers the world in which he has the injunctive right. This will always be the case, because in this world he has more options. For example, if Joe has the injunctive right then he could sell that right to Roger for \$100, which is the same amount he would receive if the remedy were damages. However Joe also has the option of selling the right for a different value, or not selling it at all.
(B) Roger prefers the world where the remedy is damages. If damages are set correctly then this will always be true. The reason is that damages are set to be *exactly* the externality that Roger is imposing on Joe by owning roosters. Notice that damages are \$300 when Roger owns roosters with no coop, which is exactly

how much Joe's payoff is decreasing. Similarly, the damages for roosters and a coop is the $100 that Joe's value decreases in that scenario.
(C) If damages are set incorrectly then there is no guarantee that the efficient allocation will arise. For example suppose damages were set at $800. Roger would never choose to pay this and raise roosters even though it's efficient for him to do so.
(D) Both Roger and Joe would rather have the remedy be an injunction or damages rather than inalienability. This is because the efficient allocation requires that Roger raise roosters, but he can never gain this right.

II. Intellectual Property
Intellectual property rights take goods which seem to fit the definition of a public good: non-rivalrous and non-excludable, and tries to get them to fit the definition of a private good: rivalrous and excludable.

	Non-rivalrous	Rivalrous
Non-excludable	National Defense, Knowledge	Commons
Excludable	—-	Apple

Copyrights and patents both assign monopoly rights to information and make it illegal for someone to infringe on these rights. Thus making the knowledge at least excludable, and ideally rivalrous as well.

	Non-rivalrous	Rivalrous
Non-excludable	National Defense	Commons
Excludable	Knowledge	Apple, Knowledge

The tradeoff inherent in these property rights is that monopoly can be inefficient, yet we want to create some incentive for people to create knowledge.