

**Ronald H. Coase**  
**The Problem of Social Cost**  
 Perspectives, p. 200

- The problem is reciprocal in nature.
  - Asking the wrong question.
  - What question should we ask instead?
- Implications for decision-makers?



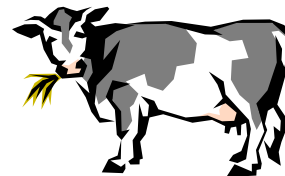
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**Coase Hypothetical**

Annual Cost of Fencing = \$9  
 Price of Crop per Ton = \$1



Number in Herd (Steers)	Annual Crop Loss (Tons)	Crop Loss Per Additional Steer (Tons)
1	1	1
2	3	2
3	6	3
4	10	4



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## Transaction Costs

- Finding the parties with which to deal.
- Informing the parties that you wish to deal.
- Conducting negotiations.
- Drafting the agreement.
- Inspecting or policing compliance with the agreement.



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## The Coase Theorem



- Outcome without transaction costs.
  - Ultimate result, which maximizes production, is the same, no matter what the initial delimitation of rights.
- Outcome with transaction costs.
  - Rearrangement of rights will only occur if increase in value of production exceeds transaction costs.



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## Strong and Weak Versions of the Coase Theorem

- The **Invariance** Proposition (*strong*)
  - In a world of zero transaction costs, a change in legal rules will have no effect on the allocation of resources.
- The **Efficiency** Proposition (*weak*)
  - Regardless of initial entitlements in a world of zero transaction costs, individuals will bargain to garner all possible gains from trade.



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## Another Hypo

- Ms. Jones owns and operates a hog farm.
- Her revenues are \$1000 per month.
- The damage to the neighbors (odor) is valued at \$1500 per month.
- There are no transaction costs.



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## Scenario No. 1

**Ms. Jones has the RIGHT to operate the hog farm.**

**(Neighbors do not have the right to be free of ill effects of the hog farm.)**

- How much would the neighbors be willing to pay Ms. Jones not to operate the hog farm?
- How much would Ms. Jones demand to forego operating the hog farm?
- What would the end result be?



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## Scenario No. 2

**Ms. Jones DOES NOT have the RIGHT to operate the hog farm.**

**(Neighbors have the right to be free of ill effects of the hog farm.)**

- How much would it cost Ms. Jones to operate the hog farm if she had to pay the neighbors off for their damages?
- How much would Ms. Jones' net revenue be after paying off the neighbors?
- What would the end result be?



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## Moral of the Story

No matter what the rule is (the initial entitlement or delimitation of rights), Ms. Jones will not operate the hog farm.



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## Wealth Effects of Not Operating the Hog Farm (Weak Proposition)

- Already had the hogs.
- Land particularly suited for hog farming - pig sties already in place.
- The only thing Ms. Jones knows how to do is hog farm.
- Local feed store.



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## Another Example on Coase

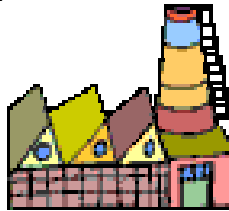
- Factory emits soot.
- Five neighbors hang clothes outside to dry because they don't have dryers.
- Soot damages neighbors' clothes.
- Damages are \$75 for each neighbor, \$375 total ( $\$75 \times 5$ ).



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## Potential Solutions

- Screen that catches the soot = \$150.
- Everyone gets an electric dryer = \$50 each, \$250 total ( $\$50 \times 5$ ).
- Everyone gets new clothes = \$75 each, \$375 total ( $\$75 \times 5$ ).

**Strong Version:** Either way, the screen will be chosen.



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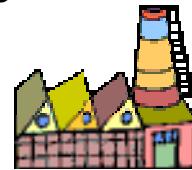
## Transaction Costs Taken Into Account

- Factory emits soot.
- Five neighbors hang clothes outside to dry because they don't have dryers.
- Soot damages neighbors' clothes (\$75 each, \$375 total).
- **Transaction costs** are \$60 for each neighbor, \$300 total (\$60 x 5).
- **Transaction costs** are \$100 for the factory.



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## Transaction Costs Taken Into Account

For the residents:

- Screen that catches the soot =  $\$150/5$   
=  $\$30 + \underline{\$60 \text{ in transaction costs}}$  = \$90  
each, \$450 total ( $\$90 \times 5$ ).
- Everyone gets an electric dryer = \$50  
each, \$250 total ( $\$50 \times 5$ ).
- Everyone gets new clothes = \$75  
each, \$375 total ( $\$75 \times 5$ ).



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What result?

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## Transaction Costs Taken Into Account

If the factory is assigned the entitlement initially, and therefore the residents must pay for the solution—

the residents would buy dryers (\$250).



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## Transaction Costs Taken Into Account

For the factory:

- Screen that catches the soot = \$150.
- Everyone gets an electric dryer = \$50 each, \$250 ( $\$50 \times 5$ ) + \$100 in transaction costs = \$350.
- Everyone gets new clothes = \$75 each, \$375 ( $\$75 \times 5$ ) + \$100 in transaction costs = \$475.



What result?



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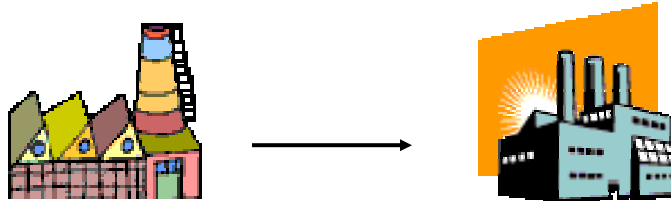
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## Transaction Costs Taken Into Account

If the residents are assigned the entitlement initially, and therefore the factory must pay for the solution—

the factory would buy the screen (\$150).



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## Robert C. Ellickson *Order Without Law: How Neighbors Settle Disputes* Perspectives, p. 210

### Ellickson's Restatement of the Coase Theorem

- What is the formal law?
- Parties settle disputes “*in* the shadow of” the formal law.



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## Ellickson, *Order Without Law* Cont'd

### Ellickson's Restatement of the Coase Theorem Cont'd

- No transaction costs leads to “complete enforcement.” No violation of an entitlement will be ignored.
- The Invariance or Strong Proposition.



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## Ellickson, *Order Without Law* cont'd

### The Efficiency or Weak Proposition

- Regardless of the content of the law, people will structure their affairs to their mutual advantage (*whether open range or closed range*).
- Parties resolve disputes “*beyond*” the shadow of law.
- Neighbors override formal law with their informal norm of cooperation.



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## Ellickson, *Order Without Law* Cont'd



### Settlement of Trespass Disputes

- Norm of Cooperation
- Incomplete Enforcement: The Live-and-Let Live Philosophy



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## Ellickson, *Order Without Law* Cont'd

### Settlement of Trespass Disputes Cont'd

- Mental Accounting
- Controlling Deviants



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## Ellickson, *Order Without Law* Cont'd

### A Few Points to Consider

- Homogeneity
- Population density
- Rural v. urban



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