1. INTRODUCTION

A. INTERESTING QUESTIONS ABOUT LAW, ORGANIZATION & ETHICS

Surrogacy, hepatitis, plea bargaining, rescue, franchises, cannibalism, health insurance, bankruptcy

Strictly liability for damage versus liability only if negligent

Worker cooperatives or investor owned firms

When should it make a difference that the polluter or pollutee was there first
B. ECONOMICS PROVIDES THE ANSWERS

C. ECONOMICS IS THE STUDY OF WHAT, HOW AND FOR WHOM

1. LAW INFLUENCES WHAT, HOW AND FOR WHOM

2. STRUCTURE IS INFLUENCED BY COSTS AND BENEFITS

3. INCENTIVES

4. ECONOMICS ALSO PROVIDES ETHICAL PRECEPTS
2. RATIONAL BEHAVIOR, PREFERENCES AND PRICES

A. RATIONALITY

1. DEFINITION: RANK ORDER PREFERENCES, TRANSITIVE AND REFLEXIVE AND CHOOSES MOST DESIRED FEASIBLE CHOICE.

2. MOST PEOPLE ARE RATIONAL MOST OF TIME

3. MATHEMATICAL MODELS DO NOT IMPLY COGNITION

4. MISTAKES CAN BE MADE
B. PREFERENCES AND UTILITY FUNCTIONS

1. PREFERENCES ARE ORDINAL

2. PREFERENCES ARE CHARACTERIZED BY UTILITY FUNCTIONS

C. PRICES REFLECT MARGINAL VALUATION
CAN WE GO FROM THE INDIVIDUAL TO THE COLLECTIVE

We can add up individual demand curves to get market demands

Can we add up individual preferences to get to collective preferences?

Individual decisions are rational

Can we say the same thing about collective decisions
3. PARETO OPTIMALITY VERSUS UTILITARIANISM

A. PRESCRIPTIVE VERSUS DESCRIPTIVE THEORIES
B. HOW DO WE GO FROM INDIVIDUAL PREFERENCE TO COLLECTIVE PREFERENCE?

What is the group’s most preferred policy?

Should it make any difference if X greatly prefers B to C?

Should it make any difference in the group’s choice if policy D is not available?

Unfortunately, in this example, majority rule does not provide an answer.
C. UTILITARIAN APPROACH – SUM OF UTILITIES

EVERYONE WEIGHTED EQUALLY

REQUIRES CARDINAL INTERPERSONAL COMPARISONS OF UTILITY
D. PARETO OPTIMALITY

1. PARETO IMPROVEMENT:

IF WE CAN MAKE ONE OR MORE PEOPLE BETTER OFF WITHOUT MAKING ANYONE WORSE OFF, WE SHOULD DO IT.

2. PARETO OPTIMAL – ECONOMIC EFFICIENCY

WE ARE AT AN OPTIMAL IF PARETO IMPROVEMENTS ARE IMPOSSIBLE. THAT IS, IF NO ONE CAN BE MADE BETTER OFF WITHOUT MAKING SOMEONE WORSE OFF.

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3. PARETO CRITERION IS ORDINAL AND DOES NOT REQUIRE INTERPERSONAL COMPARISONS OF UTILITY IS PROBABLY LEAST CONTROVERSIAL RULE.
4. UNFORTUNATELY, THERE MAY BE MANY PARETO OPTIMAL OUTCOMES, BUT THE CRITERION GIVES NO GUIDANCE REGARDING WHICH TO CHOOSE.

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A, B AND C ARE ALL PARETO OPTIMAL.
D, E, AND F ARE NOT PARETO OPTIMAL
A IS PARETO SUPERIOR TO D.
B IS NOT PARETO SUPERIOR TO E.
IF A-G ARE THE ONLY POSSIBILITIES, THEN G IS PARETO OPTIMAL EVEN THOUGH THE WHOLE PIE IS NOT CONSUMED.
E. WHY DISTRIBUTION IS NOT CONSIDERED

1. LAW IS POOR WAY TO DISTRIBUTE WEALTH. TAX SYSTEM IS A BETTER METHOD

2. LAW MAY NOT BE ABLE TO DISTRIBUTE WEALTH.

3. THEORIES OF JUST DISTRIBUTION UNDEVELOPED WITH LITTLE CONSENSUS

4. SOME THEORIES OF JUSTICE CONTRADICT PARETO OPTIMALITY

5. SOME JUST ARGUMENTS ARE EFFICIENCY ARGUMENTS IN DISGUISE
4. COST-BENEFIT ANALYSIS AND ECONOMIC EFFICIENCY

A. PARETO IMPROVING MOVES ARE NOT PRACTICAL

B. KALDOR-HICKS COMPENSATION PRINCIPLE

IF THOSE WHO GAIN FROM A POLICY COULD IN PRINCIPLE COMPENSATE THOSE WHO ARE HARMED, THEN SHOULD UNDERTAKE POLICY EVEN IF THOSE HARMED ARE NOT COMPENSATED.

C. QUASI-LINEAR UTILITY: \( U_i = m + f(x_1, x_2, \ldots, x_n) \)

A CHANGE IN WEALTH DOES NOT ALTER ANY INDIVIDUAL’S CONSUMPTION OF ITEMS \( X_i \), IT ONLY CHANGES THE AMOUNT OF \( M \) THAT EACH PERSON CONSUMES
D. COST-BENEFIT ANALYSIS

IF THE BENEFITS TO SOME OUTWEIGH THE COSTS TO OTHERS, THEN WE SHOULD UNDERTAKE POLICY EVEN IF HARMED INDIVIDUALS ARE NOT COMPENSATED.

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A IS NOT PARETO SUPERIOR TO F, BUT IN COST-BENEFIT TERMS IT IS. IN COST BENEFIT TERMS F IS SUPERIOR TO E.

NOTICE THAT EVERYTHING MEASURED IN PRICES, NOT UTILITY.
5. TRANSACTION COSTS

A RANCHER’S COWS TRAMPLE THE FARMER’S CORN.

WHO SHOULD BE LIABLE FOR THE DAMAGE, THE FARMER OR THE RANCHER?

UNDER WHICH LEGAL REGIME IS THERE LESS DAMAGE?
A. INTRODUCTION

1. TO ANSWER THE PREVIOUS QUESTION, ONE NEEDS TO KNOW ABOUT TRANSACTION COSTS

2. THE CONCEPT IS CRITICAL FOR OUR UNDERSTANDING OF LAW AND ORGANIZATION.

3. TRANSACTION COSTS ARE THE COSTS OF MAKING AND ENFORCING THE EXCHANGE OF ENTITLEMENTS
B. NEGOTIATION COSTS -- HAGGLING

1. WHEN BILATERAL MONOPOLY, HAGGLING MAY BE EXTENSIVE
2. MONOPOLY HOLD-OUT PROBLEM AND EMINENT DOMAIN

MOUNTAIN VIEW

10 PEOPLE (A, B ... J) OWN LAND ALONG THE PROPOSED HIGHWAY. EACH VALUES THEIR OWN PROPERTY FOR 1 MILLION DOLLARS.

THE STATE VALUES THE HIGHWAY AT $300 MILLION BEYOND THE COST OF BUILDING IT

IF YOU ARE PERSON D HOW MUCH WILL YOU ASK FOR FOR YOUR LAND?
3. FREE-RIDERS AND MARKET FAILURE

There are 1000 houses surrounding a polluting factory. The factory has the right to pollute. It would cost the factory $500,000 to move away. Each household values the clean air at $1000. So the total benefit to the residences is $1,000,000. How much would you offer to pay for the factory to move.
C. MONITORING, ENFORCEMENT AND AVOIDANCE COSTS

1. INSPECTION, SUPERVISION, AND VERIFICATION ARE COSTLY

2. MONITORING COSTS VARY ACCORDING TO SUBSTANCE OF AGREEMENT; WHEAT OR USED CAR, COMMISSION OR HOURLY WAGE

3. AVOIDANCE COST: COST OF CHEATING ON AGREEMENT
COASE THEOREM: If there are zero transactions costs and mutually beneficial trades are always made when transaction costs are low, then, whatever the *initial* assignment of entitlements, (a) the outcome will be efficient, and (B) the outcome will be the same when changes in the distribution of wealth do not affect consumption patterns.

D. AN INTUITIVE EXAMPLE OF THE COASE THEOREM:

INVARIANCE OF THE WEALTH MAXIMIZING OUTCOME

E. SUBTLETIES

1. UNIMPORTANT CHANGES IN CONSUMPTION PATTERNS
2. IMPORTANT CHANGES IN CONSUMPTION PATTERNS.
   NO LONGER INVARIANT, BUT STILL PARETO OPTIMAL
3. MORE HAGGLING AND POSSIBLE NO TRADE IF GOES TO WRONG PERSON
6. FENCING IN AND FENCING OUT – THE COASEAN ANALYSIS

COASE THEOREM: If there are zero transactions costs and mutually beneficial trades are always made when transaction costs are low, then, whatever the initial assignment of entitlements, (a) the outcome will be efficient, and (B) the outcome will be the same when changes in the distribution of wealth do not affect consumption patterns.

A. PROOF

B. ILLUSTRATIVE EXAMPLE.
   1. RANCHERS V. FARMERS
   2. CHANGES IN WEALTH ON CONSUMPTION PROFILES
   3. FENCING IN AND FENCING OUT

C. DO PARETO IMPROVING CHANGES ALWAYS OCCUR WHEN TRANSACTION COSTS LOW?
   1. THEORETICAL RESULTS
   2. EMPIRICAL RESULTS

D. HIGH TRANSACTION COSTS AND THE MIRROR COASE THEOREM
   1. POLLUTING FACTOR
2. OVERHEAD FLIGHTS

7. COASE VERSUS PIGOU

A. INTRODUCTION

1. WHO CAUSED AN ACCIDENT, THE PEDESTRIAN ON THE SIDEWALK OR THE DRUNK DRIVER?

2. IF EFFLUENT FROM A FACTORY KILLS FISH IN A FISH FARM, HOW SHOULD THE DAMAGE BE REDUCED?

3. COASE SHOWED THAT THE STANDARD TEXTBOOK EXAMPLE OF AN EXTERNALITY PROBLEM AND ITS SOLUTION (PIGOVIAN TAXES) IS EITHER WRONG (IF LOW TRANSACTION COSTS) OR MISLEADING.

4. DEFINITION of PIGOVIAN TAX: THE GOVERNMENT CHARGES A POLLUTION TAX (THE PROCEEDS GOING TO THE GENERAL PUBLIC AND NOT TO THE POLLUTEE IN PARTICULAR).
B. SUPPOSE FIRST THAT ONE WATER POLLUTING FACTORY AND ONE OWNER OF THE POLLUTED DOWNSTREAM LAKE.

1. IF THERE ARE ZERO TRANSACTION COSTS, AND POLLUTER HAS THE ENTITLEMENT TO POLLUTE, THEN THE VICTIM WILL BRIBE THE POLLUTER TO MOVE FROM I TO E.

2. IF THERE ARE ZERO TRANSACTION COSTS AND VICTIM HAS THE ENTITLEMENT TO NO POLLUTION, THEN POLLUTER WILL BRIBE THE LAKE OWNER TO MOVE FROM 0 TO E.

3. POINTS (1) AND (2) ILLUSTRATE THE COASE THEOREM.

3. IF THERE ARE ZERO TRANSACTION COSTS, THEN A PIGOVIAN TAX WILL MAKE THE OUTCOME INEFFICIENT. THE POLLUTEE WILL BE ABLE TO BRIBE THE POLLUTER TO PRODUCE LESS THAN THE OPTIMAL
C. SUPPOSE THAT MANY POLLUTERS AND POLLUTEES SO THAT TRANSACTION COSTS ARE HIGH.

1. GIVING THE FACTORY THE RIGHT TO POLLUTE WILL RESULT IN TOO MUCH STEEL PRODUCED (I),

2. GIVING THE POLLUTEES THE RIGHT TO BE POLLUTION-FREE WILL RESULT IN TOO LITTLE STEEL PRODUCED (0).

3. HENCE SOME OTHER PROCEDURE IS NEEDED.

   A. REGULATION. NOT ALLOW THE STEEL COMPANY TO PRODUCE MORE THAN E. OR

   B. USE A PIGOVIAN TAX.
D. EVEN IN THE HIGH TRANSACTION COST CASE, THE GRAPHICAL REPRESENTATION MAY BE VERY MISLEADING.

1. LOOKING AT THE GRAPH, THE SOLUTION TO POLLUTION IS TO REDUCE THE AMOUNT OF POLLUTION FROM THE FACTORY.

2. BUT BOTH THE POLLUTEE AND THE POLLUTER CAN HAVE AN EFFECT ON THE AMOUNT OF DAMAGE FROM POLLUTION.

FACTORY CAN REDUCE OUTPUT OR PUT IN FILTER.

LAKE OWNER CAN FILTER WATER, GROW POLLUTION RESISTANT FISH, GROW THE FISH ELSEWHERE.

PARALLEL ANALYSIS TO CAPITAL AND LABOR PRODUCING OUTPUT

D. THE OBJECTIVE OF THE LAW IS TO DESIGN A SYSTEM THAT ENCOURAGES OPTIMAL BEHAVIOR BY THESE UNRELATED PEOPLE.
A. APPLIED COST–BENEFIT ANALYSIS

WEIGH THE BENEFIT OF REDUCING HARM AGAINST THE COST OF DOING SO.

LEGAL ISSUES ARISE BECAUSE DIFFERENT PARTIES CAN REDUCE EITHER THE LIKELIHOOD OR THE SEVERITY OF THE DAMAGE.

B. ECONOMISTS ALWAYS WORRY ABOUT INCENTIVES
B. METHODS

1. Determine who could influence the outcome; then ask how they could influence the outcome and at what cost.

2. Ask what would have been done if there were a merger of all of the relevant parties. E.g., what would steel firm do if it owned the lake and the steel factory?

3. Ask who would end up with which entitlements if there were zero transaction cost in exchanging the entitlements. E.g., homeowners would decide whether they walked into their backyards while airlines would decide whether they crossed the airspace 10,000 feet above, rather than vice versa.

4. Ask how individuals will respond in the future to the law. Does the law create incentives for efficient outcomes?
C. A drunk driver drives onto a sidewalk and hits a pedestrian. Who should be liable?

1. Which parties could have influenced the outcome?

   Drunk driver; pedestrian, city, and the owner of property

2. The second question to ask is: how these parties could either prevent the accident or reduce the severity of damage.

3. Compare costs and benefits and decide on the efficient solution. Some of the previous suggestions are clearly impractical. That is, they are either very costly to implement or they provide little benefit.

4. Ask which rule promotes the efficient outcome. If the drunk driver is liable for the damage to the pedestrian, he will have a greater incentive to take care (by not driving when drunk, for example) than if he is not liable.
D. Hawks and Power Lines

In Chase v. Washington Water Power (111 P.2d 872) two hawks were fighting. Their wings short-circuited a high-tension wire with a guy wire that touched a barbed wire fence owned by Chase. The electrical charge went through the barbed wire fence and set fire to Chase’s barn, which was attached to the fence.

In order to avoid some of the technical details, I will describe a slightly different scenario. The wing-tips of the hawks spanned the distance between two electrical lines. The resulting short circuit turned the hawks into a fireball that set the wooden fence below on fire, as well as the barn connecting to it.

Who should be liable for the damage?

Answer: Go through the same steps as in the previous problem.
E. Who owns Barry Bonds’ record making baseball?

Who is entitled to the ball – Popov (whose glove touched it when he was hit) or Hayashi who got it under the bench?

The best economic insight into answering this question is to ask how the ruling would affect future behavior.

If Popov was awarded the ball, then, in the future, fans would be less likely to shove the person reaching for the ball and therefore if the person dropped the ball there would be no dispute regarding the reason why.

F. Can a murderer inherit from the person whom he has murdered?

Elmer Palmer poisoned his grandfather when he learned that his grandfather was planning to change his will to exclude Elmer from inheriting (Riggs v. Palmer, 22 N.E. 188, 1889). Should the will be enforced or should Riggs, another relative of the grandfather, be allowed to inherit the property instead of Palmer?
The economic logic is similar to the Bonds' baseball case.

9. SMOKING REGULATIONS

Should smokers have the entitlement to pollute the air or should non-smokers have the right to smoke free air? Should smoking be allowed on airplanes or in restaurants?

A. Who causes the harm from smoking?

From Coase we know that both smokers and non-smokers may undertake action to reduce the damage to non-smokers from smoke.

B. In many (but not in all) situations the exchanging of the right to smoke involves high transaction costs.

C. The determination of the efficient outcome is dependent upon costs and benefits, which in turn are based upon preferences and technology.
D. How do we decide who should have the rights?

An important method of deciding the allocation of rights is to ask who would end up with the rights if the transaction cost of exchanging these rights were zero.

1. As outsiders we can only make educated guesses regarding who values the right more. Consider the following question: If transaction costs of exchanging the right to smoke were zero, would smokers end up with the right to smoke or would non-smokers end up with the right to smoke free-air?

2. In general, economists make comparative static predictions rather than predictions regarding level.

3. The best method is to look for analogous markets and see what the results are. It is quite clear that smokers who go to bars implicitly buy the rights from non-smokers who go to bars.

The costs and benefits are internalized in the profitability of a
business. Monopoly does not undermine our analysis.

E. One should ask who has a comparative advantage, voters, Congress or the airline companies, in deciding what airline passengers value the most (smoking or non-smoking).

UNIFORMITY IS LIKELY TO BE INEFFICIENT
10. RULES OF THUMB: SPORTS AND DRIVING RULES

A. Rules of thumb are substitutes for more costly information systems.

  Jointly economize on cost of information and misallocation.

  I.e., we want a rule of thumb that economizes on transaction costs.

  The most efficient rules will tend to survive
B. HIGHWAY SAFETY

1. STOP SIGNS

a) Price system: Too costly, but good indicator of relative value.

b) Economist doing cost/benefit study

c) Majority rule.

d) Rank.

e) Skill.

f) First come, first served. Cheap to observe.

g) Random. Right involves lower costs than left.
(tell the cop it is efficient to run stop signs, practice shaking,)

2. OTHER DRIVING SITUATIONS:

   Majority rule used where monitoring costs low and appropriate.

   Two way stop sign. 5 cars following slow car on two-lane road.

   Diamond lane for commuters

   Who backs up

   Skill test
C. SPORTS RULES:

1. SKILL AS AN ALLOCATOR

a. Skill used for right to play when easy to determine and payoff large. Especially in professional sports where previous rankings can be used.

b. Skill is more likely to be used during the game than at the beginning because less costly to determine.

c. A special skill test is more likely to be used at the beginning than during where it is generally redundant. Basketball (history)

d. A special skill test is less likely to be used where it is more difficult to implement: tennis v billiards.

e. Allocation of property rights are more important than allocation of communal rights, more likely to use a special skill test for property rights.
f. Reward skilled or unskilled?

Derived demand: objective sports—record broken; offense/defense sports—closeness creates excitement.

i. Reward skill in objective sports

ii. Reward unskilled in offense/defense sport

iii. Historical changes

iv. Organized vs. Unorganized sportss

2. Allocation of entitlements to play in non-organized situations

   Majority rule vs. First come first served.

   a. Tennis

   b. Basketball

D. DRIVE, WALK, AND JOUST – ON THE LEFT OR ON THE RIGHT
11. THE PROTECTION OF ENTITLEMENTS

A. An *entitlement* is a set of rights: freedom to use resources in a certain way and the freedom to prevent others from using these resources in certain ways.

1. Bundle of rights often go together. Parts of body; rights to land

   A. Sometimes separated. Easements: Right of B to use A’s property
      More to do with land than particular people
      registry

   B. Privity of contract: a contract cannot confer rights or impose obligations arising under it on any person or agent except the parties to it.

3. Entitlements are protected via the following methods: property rights, liability rules, communal rights and regulations.
A. Property Rights

1. *All transfers of rights are voluntary.* Makes sense since individuals know relative value.

*Excludability* allows the individual to forego present consumption for a much greater future consumption.

2. Property rights costly to enforce: policing by individual or society.

If the cost of enforcing the property right is high and the benefit is low, we may not observe property rights. No individual owns city streets.

3. *Transferability versus inalienability*

Reasons for inalienability include paternalism and third party effects. We avoid using moral externalities as an explanation of legal rulings.
C. Liability Rules


2. Used when the cost of voluntary exchange is high.

   E.g., eminent domain, driving down streets.

   Individual trespass vs. animal trespass

3. Courts are costly and only approximate the true value

4. When the transaction costs of voluntary exchange are low, property rights are preferred over liability rules
D. Communal Rights

1. Communal rights are the right to use but not to exclude.

2. Communal rights are appropriate where transaction costs associated with the exchange of property rights are relatively high compared to any possible misallocation of rights because there is no right of exclusion.

3. The problem of hyper-congestion
E. Regulation of the inputs

1. Regulations are typically used in high transaction costs cases, often based on the threat of a harm (e.g., speeding) rather than an actual harm.

2. Why are they used instead of or in addition to liability rules?

   The injurer may be judgment proof implying less than optimal amount spent on care

3. Why don't we always use regulation instead of liability rules?

   Harm infrequent

   Many inputs into the production of the output, but not all measured.

   Does not compensate the victim.
12. PROPERTY RIGHTS OR COMMUNAL RIGHTS IN KNOWLEDGE?

If seller knows house has termites, should she be forced to divulge information to potential buyer?
If buyer knows that oil underneath house, should buyer be forced to divulge to seller?

Should blackmail be illegal?

Can you call a store devoted to sexual aids “Victor’s secrets”? 
A communal right increases the spread of information but may discourage the gaining of information by the first party.

A. Duty to disclose.
   1. Information costless to obtain: termites in house
   2. Information costly to obtain: oil deposits

B. Patents grant a monopoly for 20 years.
   1. Marginal cost of gaining information high
   2. Marginal cost of disseminating information low; but patent creates monopoly with attendant ills.
   3. Alternatives: subsidized research without patent; subsidized sales

C. AIDS

The criminal HIV laws in most states have three elements.

(1) A person must reasonably know that he is infected with AIDS;
(2) the person engaged in specific behavior: donating blood or having sexual intercourse;
(3) and the person failed to inform the victim about his/her disease.
D. Blackmail. You can sell information on Rush Limbaugh’s drug habit to the newspapers, but not to the Rush himself

1. Puzzle. Economists like contracting. Why is blackmail allowed if both parties prefer blackmail instead of the party going to the newspapers.
2. Encourages costly gathering of information which is of no use except as a transfer.

E. Names used in advertising

1. If communal right, value from the name would not be maximized
2. Much higher transaction costs
to turn communal right into property right than
to sell or license property right to a third party.
13. LIABILITY FOR HARM or RESTITUTION FOR BENEFIT

A. QUESTIONS

Why do ordinary economic markets tend to rely on positive incentives (the carrot), while governments tend to rely on coercion (the stick)?

Should a person who witnesses a crime be rewarded for reporting it or punished for not doing so?

Should a polluter be taxed for creating too much pollution or subsidized for undertaking pollution control?

B. In a world of zero transaction costs the distinctions between harm and benefit and punishment and reward disappear

C. Without a 0 reference (entitlement) point, extent of harm or benefit cannot be measured.

D. With negative externalities, the zero reference point is where transactions are 0.
E. Economic markets

14. TAKINGS CLAUSE AND COMPENSATION FOR REGULATION

Amendment 5: "... nor shall private property be taken for public use, without just compensation."
U.S. Constitution

A. Governments regulate land use, automobile safety, etc.

With regard to compensation, there are three major possibilities:

(1) Gov can compensate those who are hurt by regulation
(2) Gov can compensate those who are hurt by non-regulation
(3) no one is compensated in either event.

B. In Miller v. Schoene (1958) the Supreme Court upheld a Virginia statute requiring uncompensated destruction of cedar trees infested with a pest deadly to nearby apple orchards.

1. Causation not an answer.
2. The harm-benefit distinction cannot be a guide.

3. For negative externalities, the base-line for allocating rights is efficiency, not the inefficient world in the absence of a regulation. Transaction costs too high otherwise.

C. Hadacheck v. Sebastian (1915: 239) a zoning ordinance forced a brick yard within recently expanded Los Angeles city limits to shut down.

D. Positive Externalities: Penn Central

E. Kaiser-Aetna deepened a shallow pond and then built a marina by connecting it to the ocean. Afterward, the Army Corps of Engineers demanded that the marina provide public access.

The decision depends on the long-run incentive effects.
15. COST MINIMIZATION AND LIABILITY RULES

We ignore the cost of courts, the possibility of error and risk aversion. High transaction costs will be assumed.

A. Society minimizes the total cost of damage and damage prevention.

\[ C^s = D(x, y) + x + y \]

e.g. \( D(x, y) = 100 - 4x^{1/2} - 16y^{1/2} \)

Let \( D_x \) be the partial derivative of damage. If \( X \) spends more on damage prevention, then expected damage decreases. I.e., \( D_x < 0 \).

Marginal productivity is decreasing. \( D_{xx} > 0 \) and \( D_{yy} > 0 \).

\( D_{xy} D_{xy} < D_{xx} D_{yy} \) This implies that the inputs are substitutes.

The first order conditions for cost minimization are:

\[ C^s_x = 1 + D_x(x, y) = 1 - 2x^{-1/2} = 0 \]
\[ C_y^s = 1 + D_y(x, y) = 1 - 8y^{-1/2} = 0 \]

That is, cost minimization requires that expenditures on damage prevention increase until the last dollar spent on damage prevention by X (and Y) reduces damage by one dollar.

That \( x, y \) which satisfy the first order conditions will be denoted by \( x^\Omega, y^\Omega \). \( \Omega = \text{omega} \) stands for optimal.

Second order conditions are:

\[ C_{xx}^s = D_{xx}(x, y) = x^{-3/2} > 0 \]

\[ C_{yy}^s = D_{yy}(x, y) = 4y^{-3/2} > 0 \]

\[ C_{xx}^s C_{yy}^s > C_{xy}^s C_{xx}^s \]
B. Cournot-Nash Equilibria

Society's problem is to create the correct incentive structure through a liability rule system so that two individuals X and Y each choose the correct allocation of inputs into damage reduction.

We need to have a precise understanding of equilibrium.

DEFINITION: An outcome, $x^e$, $y^e$ is a Cournot-Nash equilibrium, if given $y^e$, that $x$ which maximizes X's utility is $x^e$; and given $x^e$, that $y$ which maximizes Y's utility is $y^e$. 
C. Do not conflate Nash equilibrium with Pareto optimality.

The following game matrices should give a feeling for the concept of equilibrium and how it differs from the concept of Pareto optimality:

(i) The first example is a zero-sum game where column pays row.

In a zero-sum game, all outcomes in the matrix are Pareto Optimal

\[
\begin{array}{cc}
C_1 & C_2 \\
R_1 & 100 & 110 \\
R_2 & 50 & 0 \\
\end{array}
\]

R1, C1 is a Cournot-Nash equilibrium. Given R1, the best column can do is to choose C1; given C1, the best that row can do is choose R1.

It is easy to show that there are no other Cournot-Nash equilibria.
(ii) Prisoners' Dilemma.

Two robbery suspects are put into different cells and told that if they squeal on the other person they will get fewer years in prison.

The numbers to the left of the comma are years in prison for row; the numbers to the right of the comma are years in prison for column.

<table>
<thead>
<tr>
<th></th>
<th>C1 Squeal</th>
<th>C2 Not Squeal</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1 Squeal</td>
<td>10, 10</td>
<td>5, 20</td>
</tr>
<tr>
<td>R2 Not Squeal</td>
<td>20, 5</td>
<td>7, 7</td>
</tr>
</tbody>
</table>

$R^e, C^e$ is not equal to $R^\Omega, C^\Omega$. 

(iii) Game of chicken.

In the game of chicken two cars drive toward each other, the first to swerve is chicken. Here the numbers represent utility. So that the larger the number, the greater the utility.

Utility for Row, Column
Larger number is better

<table>
<thead>
<tr>
<th></th>
<th>C₁</th>
<th>C₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swerve</td>
<td>10, 10</td>
<td>5, 20</td>
</tr>
<tr>
<td>R₁</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swerve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R₂</td>
<td>20, 5</td>
<td>1, 1</td>
</tr>
<tr>
<td>Not Swerve</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R₁, C₂ and R₂, C₁ are Cournot-Nash equilibria. R₁, C₂; R₂, C₁ and R₁, C₁ are Pareto optimal.
D. Strict liability by X

The injurer, X, is strictly liable for all damage to the injured party, Y. Each party is responsible for his/her own prevention costs.

Nuclear power plants are strictly liable for all damage.

\[
\begin{align*}
C_{X:SL} &= x + D(x, y) \\
C_{Y:SL} &= y + D(x, y) - D(x, y) = y
\end{align*}
\]

Y wants to minimize her costs, \( C_{Y:SL} = y \).

X will try to minimize his cost, given that Y has set \( y \) equal to 0. First order conditions for X:

\[
C_{x:SL}^X = 1 + D_x(x, 0) = 0
\]

If \( y^\Omega > 0 \), then the Cournot-Nash equilibrium under strict liability is not efficient since under strict liability, \( y^e = 0 \).

Also if \( y^\Omega > 0 \), then \( x^e > x^\Omega \).
So strict liability is efficient only when the optimal amount of damage prevention by the injured person, Y, is zero. Damage from nuclear power plant explosions roughly approximates the situation where the victim can do little to prevent harm.
E. No Liability by X

Victim is liable for her damages; injurer only incurs prevention costs.

If you catch the flu from me, you cannot sue me for damages.

\[
\begin{align*}
  CX_{0L} &= x \\
  CY_{0L} &= y + D(x, y)
\end{align*}
\]

X is not liable for damage to Y and therefore X will choose to spend nothing \((x = 0)\) on preventing damage to Y.

Y's cost function will therefore be \(CY_{0L} = y + D(0, y)\). Y will minimize this function. The first order conditions are:

\[
C_y^{y_{0L}} = 1 + D(0, y) = 0.
\]

If \(x^\Omega = 0\), then the Cournot-Nash equilibrium under no liability will yield the efficient result. However, if \(x^\Omega > 0\), then no liability produces an inefficient equilibrium. X will spend too little on damage prevention and Y will spend too much on damage prevention.
16. NEGLIGENCE RULES

Strict liability and no liability are appropriate only where one side, the injurer in the case of strict liability or the victim in the case of no liability, can effectively reduce damage.

So what about all the middle cases where efficiency demands that both sides undertake precaution? It is the negligence family of rules that have been designed to take care of this possibility.

Economists define negligence as spending less than the optimal on damage prevention.

Thus $X$ is negligent if $x < x^\Omega$,

and $Y$ is negligent if $y < y^\Omega$. 
A. SIMPLE NEGLIGENCE. E.g., medical malpractice.

1. Definition of rule:

If \( x < x^\Omega \), that is, \( X \) is negligent, then \( X \) is liable for the damage:

\[
C^X:N = x + D(x, y), \quad C^Y:N = y + D(x, y) - D(x, y) = y.
\]

If \( x \geq x^\Omega \), then \( Y \) is liable for the damage:

\[
C^X:N = x, \quad C^Y:N = y + D(x, y).
\]
2. This rule creates incentives for efficient behavior. \( x^{\Omega}, y^{\Omega} = x^e, y^e. \)

a. If Y has chosen \( y^{\Omega} \), then X will choose \( x^{\Omega} \).

For \( x \geq x^{\Omega} \), X's cost function is \( C^{X:N} = x \).

For \( x < x^{\Omega} \), X's cost function is \( C^{X:N} = x + D(x, y^{\Omega}) \).

By spending an additional dollar, damage will be reduced by more than a dollar; it will be cost effective for X to increase his expenditures until \( x = x^{\Omega} \).

At \( x = x^{\Omega} \), X gets an additional bang for his buck because he is no longer liable for the damage. Therefore, given \( y^{\Omega} \), X will choose \( x^{\Omega} \).

b. Now given \( x = x^{\Omega} \), Y's cost function is \( C^{Y:N} = y + D(x^{\Omega}, y) \).
Y will increase y until the last dollar spent on damage prevention reduces damage by a dollar.
But that is $y^\Omega$.

So indeed, $x^\Omega$, $y^\Omega$ is a Cournot-Nash equilibrium.

B. NEGLIGENCE WITH CONTRIBUTORY NEGLIGENCE

1. DEFINITION: Negligence with contributory negligence means that the injurer compensates the victim only if the injurer is negligent and the victim is not negligent.

If $x < x^\Omega$ and $y \geq y^\Omega$, that is, X is negligent and Y is not negligent

\[
\begin{align*}
CX:N &= x + D(x, y) \\
CY:N &= y + D(x, y) - D(x, y) = y
\end{align*}
\]

Otherwise:

\[
CX:N = x
\]
\[ CY:N = y + D(x, y) \]

B. Equilibrium: Negligence with contributory negligence promotes efficient outcomes without the need for many transfers.

C. Problem: NCN does not seem fair (equitable).

Suppose that the injurer was driving 100 miles per hour in a 60 mph zone while the victim was driving 70 mph. Under NCN the victim could collect nothing even if she were only a little bit negligent.
C. COMPARATIVE NEGLIGENCE

The greater the injurer's relative negligence compared to the victim's, the greater the percentage of the damage the injurer pays.

1. DEFINITION: Injurer's relative negligence, $R^X$.

(a) If $x \geq x^\Omega$, then $R^X = 0$.

That is, if $X$ is not negligent, he is liable for none of the damage.

(b) If $x < x^\Omega$ and $y \geq y^\Omega$, then $R^x = 1$.

$X$ is liable for all the damage to $Y$.

(c) If $x < x^\Omega$ and $y < y^\Omega$, then $R^X = \frac{x^\Omega - x}{x^\Omega - x + y^\Omega - y}$. 
If both sides are equally negligent, X's relative negligence is 1/2.

2. COST FUNCTIONS UNDER COMPARATIVE NEGLIGENCE

(a) When \( x \geq x^\Omega \):

\[ C_X:CN = x + RXD(x, y) = x \]

\[ C_Y:CN = y + [1 - RX] D(x, y) = y + D(x, y) \]

(b) When \( x < x^\Omega \) and \( y > y^\Omega \)
\[ CX:CN = x + R^X D(x, y) = x + D(x, y) \]

\[ CY:CN = y + [1 - R^X] D(x, y) = y \]

(c) When \( x < x^\Omega \) and

\[ CX:CN = x + R^X D(x, y) = x + \frac{x^\Omega - x}{x^\Omega - x + y^\Omega - y} D(x, y) \]

\[ CY:CN = y + [1 - R^X] D(x, y) = y + \frac{y^\Omega - y}{x^\Omega - x + y^\Omega - y} D(x, y) \]
3. $x^\Omega, y^\Omega$ IS A COURNOT-NASH

Suppose that $Y$ has chosen $y^\Omega$.

Then if $X$ has chosen $x < x^\Omega$, then $R^X = 1$ and $X$ is 100\% liable for the damage. For $x < x^\Omega$, every dollar spent on damage prevention reduces damage by more than a dollar. So $X$ will continue to increase $x$ until the last dollar of damage prevention reduces damage by one dollar. This is at $x^\Omega$.

At $x^\Omega$, $X$ gets the added benefit, that $X$ is not liable for any of the damage.

$X$ will not increase $x$ beyond $x^\Omega$ because the extra dollar of damage prevention by $x$ does not reduce his liability which is now 0.

If $x = x^\Omega$, then $Y$ is fully liable for all damage to $Y$. $Y$ will increase spending on $y$ until the last dollar spent on damage prevention reduces damage by one dollar -- $y^\Omega$. 
Thus $x^\Omega$, $y^\Omega$ is a Cournot-Nash equilibrium.

D. Negligence versus strict liability

1. Typically, a negligence rule determines the optimal amount of inputs given that an activity takes place but not the optimal amount of the activity.

   Thus a negligence rule means that there will be too many drivers and too few pedestrian, but both pedestrians and drivers act optimally given that they are driving or walking.

   In contrast, strict liability will result in too many pedestrians and too few drivers with pedestrians undertaking too little care and drivers undertaking excessive care.

2. Strict liability is implemented when it is unclear whether the injurer should be undertaking the activity in the first place and prevention by the victim is not cost effective.
A negligence rule would achieve the same short-term incentives, but different long-term incentives. Wild animals, nuclear power

E. Acts of God

1. Suppose that your neighbors’ tree falls down during a severe windstorm and destroys your garage. Who should be liable if the tree was healthy?

2. Acts of God: $x^\Omega = y^\Omega = 0$.

Whether, there was no liability, strict liability or negligence liability, the same level of prevention would be undertaken by both sides. So, to save on court costs, the owner of the tree is not held liable for damage.
17. CRIME AND CRIMINAL LAW

A. Aggregate demand curves are downward sloping

Criminals respond to incentives

Price of a crime = probability of conviction times punishment.
\[ = P \text{ times } F \]

B. The Optimal punishment

Society wants to charge the person for the harm (H).

\[ PF = H. \]

The lower the probability of being caught, the higher the level of punishment should be.

In the real world life is more complicated.
1. Criminal activities substitute a forced conversion for a market exchange.

2. The criminal should pay for the costs of his detection.

3. Society must consider the *marginal effect* of punishment.

C. The potential for bankruptcy limits the effectiveness of monetary sanctions, creating important differences between criminal and tort law.

   The punishment for even “minor” crimes can be very high, making the criminal "judgment proof."

   Judgment proof means that the person is not deterred unless additional costs such as imprisonment are imposed on the person.

   These additional costs (unlike fines) are costly to society.

   When there are costs of punishment, society needs to consider the *elasticity of response*
D. Why do we have both a tort system and a criminal justice system?

E. Do increases in probability deter more than do increases in the severity of punishment?

If criminals prefer risk, this is equivalent to saying that their utility for money is convex.
F. Intent

Criminal law is concerned with intentional harm or criminal intent. The difference between a tortious harm and a criminal harm is that the first comes as a by-product of productive activity and is costly to the tortfeasor to prevent while in criminal cases it is costly to the criminal to do the harm.

G. Imprisonment as prevention

Imprisonment reduces crime in two ways. The threat of imprisonment is a deterrent; while actual imprisonment may prevent the person from committing more crimes.

H. Other ways to reduce crime

Economists focus on prices because they are easier to measure and fluctuate more than other variables.

A legislature can change the minimum jail term for drugs. Changing the attitudes of drug users is much harder.
The opportunity set can also affect a person’s propensity for crime.
18. MITIGATION OF DAMAGES AND LAST CLEAR CHANCE

A. QUESTIONS:

1. Should a person be liable for not rescuing someone if the cost of rescue is trivial?

2. If a motorcycle is parked illegally in the middle of the road and a truck smashes into it, who should be liable for the damage to the motorcycle?

3. When a factory emits sulfur fumes that kill a neighboring crop, what should be the extent of the factory owner's liability?

ALL OF THE ABOVE HAVE A CLEARLY DEFINED SEQUENCE

B. When the inputs occur *sequentially*, none of the damage based liability rules create the optimal incentives both for long-run efficiency and for second-best outcomes when the long-run efficient choice is not made.
C. SOLUTION TO DILEMMA: have a marginal cost liability rule.

1. The motorcyclist pays for the additional cost (swerving) that she imposes on other drivers even in the absence of any damage from an accident. This payment to others would internalize the cost that the motorcyclist is imposing on others.

2. The truck driver is then liable for any costs that he imposes on the motorcyclist beyond those that would occur if the truck driver had best responded to the motorcyclist’s inefficient behavior.
D. APPLICATIONS

1. Mitigation of Damages in Contract Law

\textit{Daley v. Irwin} (1922), plaintiff purchased defective seed and found out that the seed was defective before planting.

Farmer should undertake \textit{cost effective strategies to mitigate the damage}.

Farmer should only collect for the \textit{additional} cost of prevention and any subsequent damage that would occur if the farmer were to \textit{optimally} mitigate.

X sells to Y pork packed in barrels of brine with a warranty that the barrels will not leak.

Y finds that some of the barrels are leaky but does not repack the pork in good barrels. Y can get judgment for the cost of re-packing in good barrels, not the value of the pork spoiled after discovery of defects.
The victim is compensated for the additional cost incurred by the victim when she mitigates optimally whether the victim acts optimally or not.

2. Last Clear Chance in Accident Law -- *McKee v. Malenfant*, (1954) involved a collision between a moving truck (X) and one that had been left standing on the highway (Y).

Charge Y a fine equal to the marginal cost imposed on others (a Pigovian tax on the input).

Make "other drivers" take into account the marginal costs that they impose. “Last clear chance” makes other drivers liable for the damage when they are truly the second in the sequence and encourages them to make efficient decisions.

Herein lies an important reason for fining people for inputs such as drunken driving instead of only for the resulting damage.

When other drivers swerve out of the way of drunk drivers to avoid an accident, drunk drivers will not pay for their behavior if liability depends only on actual damage.

The doctrine can be used for or against the plaintiff.
3. Avoidable Consequences and Coming to the Nuisance

*United Verde Extension Mining Co. v. Ralston,* (1931): The plaintiff need not plant a hopeless crop that would be swept by sulfur fumes and should not recover for the damage to the crop if he did.

The plaintiff had the last clear chance and could have mitigated damages and prevented wasted seed and crop damage by not planting. However, the plaintiff recovered for profits forgone in not planting the crop. Thus we have marginal cost liability or, in legal terminology, the doctrine of avoidable consequence.

*Spur Industries v. Del E. Webb Development Co.* (1972)
19. THE GOOD SAMARITAN RULE

A. THE ISSUE: A person is lying unconscious across a railroad track. Should a passerby be compensated for saving the unconscious person's life or be found liable for not saving, or nothing one way or the other?

In general, Anglo-American courts requires no affirmative duties of bystanders, and rarely is there a legal obligation to compensate the rescuer for the minor costs incurred in rescuing.

In contrast, the Continental rule imposes Good Samaritan duties on mere bystanders when the cost of rescue is trivial and entitles the successful rescuer to a reward.

Which system is better?
B. ECONOMIC LOGIC UNDERLYING THE CONTINENTAL RULE

1. The Continental rule encourages low cost rescues.
   a. Rescuer is compensated for small costs of rescue;
   b. When the potential rescuer's costs are somewhat higher than the average, then the threat of being liable for damage to the potential rescuee will motivate the person to rescue.

2. Rule encourages efficient behavior by potential rescuee.
   By charging for the average cost of the rescue, the rescuee takes the appropriate level of care.

3. Liability by the rescuee for being rescued and liability by the rescuer for non-rescue must both be in place. The Continental rule employs both. The Anglo-American rule employs neither.

C. EXTENSIONS
The cost of rescue is not always trivial and because of that people are sometimes prevented from undertaking certain risky action in the first place.
20. THE ROLE OF BEING FIRST IN ALLOCATING RIGHTS: COMING TO THE NUISANCE

If my neighbour makes a tan-yard, so as to annoy and render less salubrious the air of my house or gardens, the law will furnish me with a remedy; but if he is first in possession of the air, and I fix my habitation near him, the nuisance is of my own seeking, and must continue. (Blackstone 1766: 402-403)

A. For Blackstone, being first is everything

Allocation to the first person entails costs associated with getting "there" first.

On the other hand, "being first is nothing" is not a satisfactory rule, either.

B. Economic logic clarifies the contingencies when being first counts and the doctrine of coming to the nuisance should be invoked.

1. The first step is to determine the optimal outcome

View the problem as an issue of resource allocation over the entire income stream, not just on those costs and benefits after the second party came.
2. The second step is to design rules that lead to that outcome.

C. Six scenarios as candidates for efficient allocation over time.

(1) The nuisance comes first, the residences come second, and the nuisance leaves;

(2) the nuisance comes first, the residences come second, and both remain with each mitigating the damage optimally given that the other is there;

(3) the nuisance comes first and the residences never come to the area;

(4) the residences come first and the nuisance never comes;

(5) the residences come first, the nuisance comes second with each mitigating the damage optimally given that the other is there; and

(6) the residences come first, the nuisance comes second, and the residences leave.

Note that we do not consider all possible scenarios.
D. The next step is to determine the liability rule or property right that promotes the efficient sequence.

Strategic behavior by the participants trying to be first and thereby gaining extra consideration is avoided by granting extra consideration to the side which *should* have been first instead of to the side who was actually first.

The extra consideration is the inclusion of moving costs by the side who should have been first into the cost-benefit calculations.
E. Determining Factors

1. Character of the area predetermined

Parties should anticipate the future.

Bove v. Donna Hanna: It is inappropriate to consider the costs of the pollutee rebuilding since the pollutee should not have been there in the first place.

A judicial outcome granting the entitlement to the polluter serves as a precedent.

Same holds when nuisance t inappropriately builds in an area suitable for residential housing.
2. Character of the place determined by its first use.

Sometimes large expanses of land are featureless, and the first use of the land establishes its character.


Suppose that developers could collect damages or force dumps to move. Would developers or homeowners be better off in the long-run?

3. Character of the place determined by the second use

There are many situations where the first party should have been there first, yet the second party creates the dominating character of the place.

Cities often expand into rural areas. Rural areas are appropriate for animal husbandry, but cities and cattle feedlots do not mix very well.

Of the three possibilities, cities leap-frog around cattle feedlots, urban housing and businesses border cattle feedlots, and feedlots re-locate, the last is clearly the most efficient.
In such situations, the law is unlikely to compensate for the costs of relocation even though the party was there first and should have been there first.

REASONS:

(1) Alternative land uses are likely to be more profitable, so that the feedlot owner would benefit from relocating.

(2) Overtime, the owner of the property could have let the property depreciate.

(3) A system of compensation would be costly since in the absence of compensation the outcome (shutting down the feedlot) is the same and a court case is rarely needed.

(4) A system of compensating feedlots for moving would encourage owners to hold on to their businesses in order to collect damages.

Property rights are contingent in space and time.

Even though, the cost of relocation of feedlots is factored in, it is easy to see that the efficient outcome is for the feedlots to move as the city expands.
NON-CONFORMING LAND USES

When substantial moving costs and small negative externalities, the stream of benefits may make it economically efficient to give rights to an activity when it should have been first even if the activity would have been outlawed if it had not been first.

There is a very marked distinction to be observed in reason and equity between the case of a business long established in a particular locality, which has become a nuisance from the growth of population and the erection of dwellings in proximity to it, and that of a new erection or business threatened in such vicinity. Barth v. Christian Psychopathic Hospital Association

When there is severe damage to the nonconforming structure due to fire, earthquake, etc. Then the prior use is no longer prior, and cannot be reinstated.
4. The character of the place is determined by the second use, but the second use should not have been there

In *Spur Industries v. Del E. Webb Development Co.* (1972: 700)

The developer was entitled to enjoin the cattle-feeding operation as a nuisance but was required to *indemnify* the cattle feeder for the reasonable cost of moving or shutting down.

The cattle-feeding operator could not have reasonably foreseen the development of a retirement community nearby and therefore should be compensated for all costs associated with moving his business.

Without compensation an inefficient precedent would have been established.
21. DEFAULT RULES AND BREACH OF CONTRACT

A. Courts have a limited impact on contract law
   1. default rules
   2. contracts guide decision

B. The role of contract law is to reduce transaction costs
   1. Implied long form contract
   2. Reduce inefficient behavior arising from poorly written contracts

C. When does a breach of contract take place?
   1. Read contract
   2. Fill in gaps
   3. Ask what the parties would have decided
   4. An example: Tsakiroglue v. Noblee Thori
   5. Determine whether court was right by looking at contracts ex post the decision.
D. Remedies for breach

1. Specific Performance
   Works well for transfers, but not for promises of performance
   Creates great bargaining power for other side.

2. Liquidated damages
   Likely to be optimal

3. Victim is expected to mitigate damages
   Creates optimal incentives for both breacher and victim
4. Pre-breach precaution

X determines likelihood of breach; Y determines damage from breach

\[ C = P(x)D(y) + x + y \]

The first order conditions are:

\[ P'(x)D(y) + 1 = 0; \text{ Equivalently, } P'(x)D(y) = 1 \]

\[ D'(y) P(x) + 1 = 0; \text{ Equivalently, } D'(y) P(x) = 1 \]

No concept of contributory negligence, instead limit scope of remedy.

No consequential damages – Kodak film

Processor has no idea regarding consequences

Victim can reduce damage
Pay for consequential damages – contractor

Contractor knows what is involved

Victim can do little to reduce damage

E. Conclusion

1. Default rules make sense

2. Incomplete contracts should be breached on occasion
22. When is a handshake a contract and when is a written contract not a contract

Courts enforce most written agreements but not all. What is the economic rationale for the different treatment?

Courts enforce some verbal agreements and not others. Why?

This chapter considers three cases – *Pennzoil v. Texaco*, *Williams v. Walker-Thomas*, and *Miltenberg & Samton v. Mallor* – for help in answering these questions.
A. Pennzoil versus Texaco

Getty Oil made a verbal agreement to sell 3/7 of its stock for $110 a share to Pennzoil. The picture of the handshake was in major newspapers.

The next day Texaco offered Getty more money and Getty sold the stock to Texaco for $128 a share for a total of 10.1 billion dollars.

Pennzoil sued Texaco for tortious interference in the contract. A jury returned a verdict in favor of Pennzoil, finding actual damages of $7.53 billion and punitive damages of $3 billion.

Was there a breach of contract? How would we decide? And if there was a breach of contract, how should damages be determined?
1. When is an agreement a binding contract?

How do we decide whether a verbal agreement is a contract or an indication of strong interest? The answer is to look at the market.

In some markets, only a written agreement means something.
In other areas, no written agreements take place.
In other areas, verbal agreements can be broken even if no written contract.
2. Determining actual damages

At trial, experts testified about the cost of Pennzoil finding and developing new oil reserves

The jury came up with the amount of $7.3 billion dollars in actual damages. Is this a good way to estimate damages?

The best way of determining damages is to not determine them at all. Specific performance is the best solution (but not available).

If specific performance not available, then there are various ways of estimating the damages.

Suppose that Getty sold to Pennzoil and then Pennzoil sold to Texaco. Pennzoil would have made $18 a share or 1.4 billion dollars. This is less than 20% of the jury's determination of the actual damages.

The court determined the cost of finding an equivalent amount of reserves less the price saved from not buying Getty stock. But the most efficient way to obtain that amount of reserves is not by drilling, but by buying firms with petroleum assets.
3. Punitive damages

Actual damages are payments to the plaintiff for harm suffered. Punitive damages are meant to punish the defendant beyond the implicit punishment of paying for the harm.

How do we decide the optimal amount of payment in case of a breach? The best way is to see what the industry standard regarding liquid damages is in cases of breach.

In the absence of contracts specifying damages, the court should try to estimate what such a contract would like if such a possibility were explicitly considered by the parties.

Thus the question becomes: would Getty Oil and Pennzoil have specified a liquidated damage penalty of 3 billion dollars? I believe this to be highly unlikely.
4. Epilogue

Because of Texaco’s threat of appeal to the federal court, Pennzoil was not guaranteed that it would get the $10.5 billion that the jury awarded. Both sides were spending enormous sums on legal costs. Pennzoil and Texaco eventually settled with Texaco paying $3 billion to Pennzoil.
Walker Thomas Furniture allowed its customers to pay in installments; the customers were given loans for purchasing the furniture, and the furniture itself was used as collateral. Often customers bought different items of furniture at different times on the installment plan. When they did, the terms of the contract included the following:

“the amount of each periodical installment payment to be made by [purchaser] to the Company under this present lease shall be inclusive of and not in addition to the amount of each installment payment to be made by [purchaser] under such prior leases, bills or accounts; and all payments now and hereafter made by [purchaser] shall be credited pro rata on all outstanding leases, bills and accounts due the company by [purchaser] at the time each such payment is made.”

I will explain it via a simple example.
Suppose that you bought a chair for $200 and promised to pay $10 a month for 24 months. If you did not pay in full, the furniture company could repossess your chair. Suppose at the end of twenty-two months, you bought a second chair for $200 so you would owe in total $220. You would then be expected to pay $11 a month for the next two years.

If you defaulted on your payment anytime in the next two years, say one year later, both chairs could be repossessed. In *Williams v. Walker-Thomas Furniture Co.*, 350 F. 2d 445 (1965), Williams had paid off all but $164 on $1,800 worth of furniture when she bought a stereo on credit, on which she subsequently defaulted. Should the contract be upheld?

Courts should be very hesitant to overturn contracts.

If contracts can be overturned because they are unfair, then contracts are made by the courts rather than by the contracting parties, who are in a better position to determine relative value.

If contracts can be overturned when the plaintiff claims the contract is hard to understand, then plaintiffs will not bother to understand contracts and contracts will be unenforceable.
Either way, the parties would not know what kind of contract they made until the courts made their decision.

Furthermore, Walker-Thomas contracts may have enabled the borrower to obtain a loan at a lower interest rate. All of these reasons suggest that the contract should be upheld.

However, efficiency requires that key parts of the contracts be clear and understandable so that people understand the bargain that they are making. Otherwise, the agreement may not be a Pareto improvement.

So why should the courts accept industry custom in the Pennzoil case but not here? In the Pennzoil case, all the parties had lawyers. In contrast, Williams was not a sophisticated buyer.

The argument here is that only in the most egregious cases – where important conditions are difficult to understand and buried in the contract, these conditions are so unreasonable that it is
extremely unlikely that the person would have knowingly agreed to them ahead of time, the person is unsophisticated, and there is little competition – that the contract should be ruled invalid.

C. Why Contracts for Criminal Behavior Are Not Enforced
The legal system enforces agreements. Facilitates cooperation between parties by making contractual commitments more credible.

Courts do not enforce contracts that promote criminal behavior.

Most contracts are not only Pareto improving for the parties to the contract, but wealth maximizing for society as a whole. But criminal activity generally imposes costs on others – the murder victim suffers a negative externality.

*Miltenberg & Samton v. Mallor*, 1 A.D. 2d 458 (1956). The plaintiff buyer asked Miltenberg & Samton, a food broker, to label cans of herring as mackerel. M&S pasted new labels on the old, which Mallor observed when he picked up the cans.
23. MARRIAGE AS CONTRACT   FAMILY LAW

Marriage is a long-term contract between two people; divorce can be viewed as a breach of the marriage contract.

Economics analysis as a descriptive theory of law is relatively weak in explaining family law.
A. Marital Relations

1. Marriage is like a partnership, and like any partnership the potential for conflict is high. The marital market reduces conflict:
   
   a. Search
   
   b. Emotional bond with less self-interest

2. With some exceptions, the law does not enter into the marital relationship.
   
   a. A spouse cannot sue the other for being a spendthrift, not doing chores
   
   b. Couple presumed to resolve differences more effectively than courts.

This hands-off attitude changes when the marriage is dissolved. In the absence of a prenuptial contract, court determines the allocation of property, children, & income.
B. Why Spousal Support

1. Most common when one spouse has specialized in household production

2. Having children is an important reason for marriage. But those women who have forgone market employment face great risk when a marriage is dissolved.

3. The risk-averse party is insured so optimal amount of risk is undertaken.

4. But moral hazard
C. Prenuptial (Ante-nuptial) Contracts

The court provides default rules regarding spousal support and property division. Couples have the alternative to write their own prenuptial contract.

Must be written

Not done at the last minute

With notification that each side should have legal advice
D. Ben Affleck gave Jennifer Lopez a 6.1-carat diamond engagement ring. The marriage was called off; should Jennifer return the ring?
1. Suppose person ending the engagement is labeled the breaching party, and courts award the ring to the other person. This creates wrong incentives.

2. A subtler rule would award the ring to the person who was better behaved during the engagement. This would be akin to a comparative negligence rule.

3. Put parties in the same position as pre-breach.

4. Ask who would end up with the ring if transaction costs were low. If the ring were the man’s family heirloom, the ring would be more valued by the man.

5. Law and etiquette regarding the return of rings has changed over the last 100 years.
Polygamy
WHO ARE THE PARENTS?

Robert and Denise went to a fertility clinic where they had Robert’s sperm fertilize donor eggs, some of which were then implanted in Denise’s uterus. Their daughter Madeline was born in February 2001.

Susan, a single person, went to the same clinic. She wanted an anonymously donated ovum fertilized by an anonymously donated sperm to be implanted in her uterus. Her son Daniel was also born in February 2001.

Unfortunately, the ovum implanted in Susan had been mistakenly fertilized by Robert’s sperm. Robert and his wife did not want the embryos fertilized by Robert’s sperm to go to anyone else. When Robert found out, he and his wife Denise went to court so that could have custody of Daniel. Who should have custody?
WHO ARE THE PARENTS?

In re Baby M, 109 N.J. 396 .2D 1227 (1988) involved a sperm-donating father and a surrogate (but natural) mother who refused to give up the baby when it was born, as required by the contract. The woman had been hired for $10,000.

Should the contract be upheld?
WHO OWNS THE EMBRYOS?

If a couple divorces, who owns the rights to the frozen embryos? The former wife wanted the frozen embryos to become a mother; the former husband did not want to be the father.
Britney Spears got married on New Year’s Eve 2003, but the marriage was annulled soon afterward. Suppose that the bride and groom received gifts. Should they return the gifts if they were opened? What if the gifts were unopened? Suppose that the dissolution took place one month, six months, or one year later. Would your answer change? Why?
BARRY BONDS SCORES AT THE CALIFORNIA SUPREME COURT

Barry Bonds and Susann “Sun” Bonds met in August 1987. Barry was a major league baseball player making $100,000 per year. Sun was unemployed. They became engaged in November 1987. In December, Barry told Sun that they would have to sign a prenuptial agreement. Sun agreed. The day before the wedding in February 1988, Barry’s attorneys presented Sun and Barry the proposed agreement. Sun was advised to seek independent counsel. She declined. Sun signed the agreement and the couple married.

When Barry filed for legal separation in 1994, Sun challenged the validity of the prenuptial agreement.
WHO GETS TO NAME THE CHILD?

The father wanted to name the 10-month-old boy “Samuel Charles.” The mother, to whom he wasn’t married, had named the child “Weather’by Dot Com Chanel Fourcast.” Here is the mother’s explanation for the unusual name. She knew little about the father’s family names and so hadn’t much to work with; the father was a weather forecaster. The woman liked the last name Weatherby, and thought that it would make a good first name; this was her fourth child, and therefore she spelled his name “fourcast” instead of “forecast.” And she liked Chanel perfume and therefore spelled “channel,” “chanel.” In Sheppard v. Speir, 85 Ark. App. 481 (2004) an Arkansas state appellate panel affirmed a trial court’s renaming of the child, Samuel Charles.
24. HARMS ARISING BETWEEN CONTRACTING PARTIES: EXPLODING COKE BOTTLES

1. CONTRACTING PARTIES: Who should be liable if

   Coke bottle explodes in your face.
   TNT explodes in your face.
   You get AIDS from a blood transfusion.
   You get herpes from your sexual partner.

2. In order to answer these questions, we first ask a different set of questions -- what difference does the assignment of liability make on the behavior of the participants.

   For example, if Coca-Cola is not liable for the damage when their bottles explode, will they produce less safe bottles?

3. We first consider exploding Coke bottles where the behavior of the consumer has little influence on the likelihood or extent of damage.
Later we discuss lawnmower accidents where the behavior of the consumer is an important input into the production of damage.
A. Default Rules; Exculpatory Clauses Allowed

1. An *exculpatory clause* allows the negation of the legal ruling (*default rule*) if there is some kind of express consent by the parties to the contrary.

2. If exculpatory clauses are allowed, the final assignment of liability is not dependent on the initial allocation of liability.
3. Coke chooses the most profitable alternative.

   By assuming liability, Coke is providing an insurance policy to the consumer. It is a tied product.

   It is possible that Coke's cost of insuring consumers is greater than the benefit accruing to them.

   Whether Coke is a monopolist or a perfect competitor, when each side is informed, profit maximization will lead to the optimal allocation of liability.

   The incentive to provide safety is no different from the incentives to provide other characteristics.
B. The Effect of Liability When Exculpatory Clauses Are Not Allowed — Symmetric Information

Suppose that the law requires that Coke be held strictly liable for the damage or the law does not allow Coke to be held liable.

i. consumers and producers equally good insurers

If consumers are informed about the risks of exploding bottles and they can obtain insurance for the same price as Coke obtains insurance, nothing is changed when liability is shifted from Coke to the consumer except that the consumer no longer buys an insurance policy with Coke. Slim vs fat bottles.
ii. One side is has a comparative advantage in insuring

We want the cheaper insurer to provide the insurance. If the law makes a mistake and requires the side that is a more costly insurer to be liable (provide insurance), then, faced with higher cost, the consumer will substitute.

Making Coke liable does not redistribute wealth from Coke to consumers.

Making Coke liable redistributes income from those who do not have bottles exploding in their faces to those who do but would not have purchased insurance if Coke were not liable.
26. CONSUMERS AND PRODUCERS ARE INPUTS INTO DAMAGE LAWNMOWERS

A lawnmower accident may occur because the mower was poorly designed or because the person was careless.

Lawnmower company cannot ex ante discriminate among buyers.

A. EFFICIENT CONTRACT

An efficient contract would not make the lawn mower manufacturer liable for all the damage

If manufacturer were strictly liable, individuals would take less than optimal care because the cost is shifted on to others (moral hazard); $y < y^\Omega$.

manufacturer would undertake excessive protection $x > x^\Omega$
If court costs low, manufacturer would be liable for those areas where consumer behavior unimportant.

B. AUTOMOBILE WARRANTIES

1. Customer responsible for scratches to paint
2. Manufacturer liable for air conditioning compressor if not tampered with
3. Manufacturer is liable for engine if auto not used in racing and oil added

C. MONOPOLY AND EXPLOITATION THEORIES

"Market power explanation” says that manufacturers take advantage of the consumer by offering him shoddy goods.

1. But, if the consumer is willing to pay more than the extra cost of producing something (quality, insurance), then the firm will provide it. Market power is exploited through price not quality.
2. Empirical evidence strongly against the exploitation theory.

Consumers with little market power often get a warranty although those with considerable market power do not.

Company A may not be liable to company B for damage arising from the use of A's products, although company A may be liable to consumer C for damage arising from the use of A's products.

D. CONCLUDING REMARKS

It may seem amoral to make cost-benefit calculations when the choice involves the possibility of death or serious injury

But individuals, governments and businesses make cost-benefit calculations every day.

GM and Ford got into trouble for doing so.
27. THE MARKET FOR INSURANCE

A. Whenever one side is liable for damage, they are insuring the other party.

1. Most people are risk averse when there is a potential for a \textit{large} downside loss.

2. \textit{Insurance shifts income from uncertain good states of the world to uncertain bad states of the world.}
B. The market for insurance exists because insurance companies have a comparative advantage in risk spreading and the transaction costs are relatively low.

1. Insurance companies try to aggregate uncorrelated risks

The law of large numbers makes the risk of an average loss less than the risk for a single loss.

Suppose that there is a 50% chance of my losing $100 and a 50% chance of my losing $0 with an expected loss of $50.

Risk-averse people prefer a less spread out risk profile and therefore will want to join in insurance pools even if there is some cost to forming them.
One-Person Risk Profile

Two-Person Risk Profile
10% chance that a house burns down and there is a thousand dollar loss
Distribution of average loss when there is one person
Expected loss is $100
10% chance that a house burns down and there is a thousand dollar loss
Distribution of average loss when there are two people
Expected loss is $100
Insurance companies reduce risks by pooling them and this is how they make money: they sell risk-reduction.

Individuals have a much harder time diversifying their portfolio of risks.

It is difficult to insure when risks are correlated.

Trade takes place only when one side has a comparative advantage.

The smaller the downside loss (when it does occur), the less likely that it will be insured.
2. Insurance companies try to control for moral hazard

Insurance may create inefficient incentives. Moral hazard exists when the presence of insurance reduces the person's incentive to take care below the optimal.
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Control moral hazard by requiring appropriate behavior, experience rating, and by having deductibles and co-insurance.

The insured also want moral hazard to be controlled.

The insurance company reduces moral hazard until the cost of reducing equals the benefit.

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*Adverse selection*—*when an insurance company cannot distinguish* between individuals with different levels of risk, and consequently people with higher than average expected risk who produce a negative expected profit for the insurance company purchase insurance more often than people with lower than average risk.
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Do not confuse moral hazard and adverse selection. Moral hazard is the change in behavior brought about by the presence of insurance. *Adverse selection concerns types of people.*

Insurance companies try to control adverse selection by separating people into risk pools.

The potential for adverse selection arises wherever there is insurance.
4. Insurance companies try to control administrative costs

Courts are a very expensive method of insuring.
5. Insurance companies provide the coverage that people want

Insurance takes away income from good states of the world and increases income in bad states of the world. The extent of this transfer should optimize the insured's expected utility.

An insurance company will not provide extra coverage if the costs of providing this coverage are greater than the value that consumers place on the extra coverage.
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Insurance takes away income from good states of the world and increases income in bad states of the world. The extent of this transfer should optimize the insured's expected utility.

An insurance company will not provide extra coverage if the costs of providing this coverage are greater than the value that consumers place on the extra coverage.

One can develop a considerable amount of intuition regarding insurance if insurance companies are viewed as cooperatives trying to maximize the utility of the insured because that is what competitive pressures force profit-maximizing firms to do.

And most are cooperatives (mutual)
i. non-pecuniary damages

Because of decreasing marginal utility of income (risk aversion), people often try to smooth out their consumption stream. That is, why people save for a rainy day and buy insurance. These are pecuniary (money) motives.

The tort system often provides for non-pecuniary damages even though we rarely observe similar insurance being purchased in the private sector.

ii. ex ante vs ex post

Insurance companies provide the insurance coverage that people want to pay for ex ante and not necessarily what they want ex post.

This issue is highlighted by considering medical insurance coverage by health maintenance organizations (HMOs). The debate over HMOs has been quite rancorous. Doctors tend to dislike them and politicians spend time trying to regulate them. What does economics tell us?
28. ROYALTIES FOR ARTISTS

California Law requires that royalties of 5 percent be paid to the artist for the increase in the value of the art when it is resold for more than $1,000.

Who should be liable for appreciation -- the artist or the investor?
A. Artist has to pay for getting into this one sided bet. The analysis is the same as the coke bottle case.

The price of a painting today is based on the value that the painting is expected to yield in the future. 50/50 chance of the painting being worth $100,000 or $300,000.

No Royalties: If the artist risk neutral, the price before the lottery is $200,000.

Royalties:  \[ P = \frac{1}{2} \times (100,000) + \frac{1}{2} \left[ \frac{1}{2} \times (300,000 - P) + P \right]. \]

If the law requires that the artist receive half the gain in appreciation, the artist will get $166,667. Half the time, the artist will receive no royalties. Half the time the painting will go up in value. The artist will receive half the increase after appreciation—\[ \frac{1}{2} \times (300,000 - 166,667) = \frac{1}{2} \times (133,333) = 66,666. \] By the end of the evening the artist will either have $166,667 or $233,333. On average, the artist will receive $200,000.
B. We need to ask who is the better insurer

When the artist buys part of the appreciation, he is adding risk to himself but taking away risk from the investor.

Artist has all eggs in one basket.

If the artist wants risk, can withhold paintings from the market.

Transaction costs are also quite high.

C. Why it makes sense for writers to get royalties, but not artists.

A by-product of the accounting

The publisher can eliminate cost of estimation by just having a royalty schedule.
D. Why don’t we look at market for guidance?

   a. Difficult because of privity of contract
   b. In Europe cannot circumvent law (but could have higher royalty)
   c. Indirect evidence: Paris not much of art market
A. Proposition 103, passed by the voters in 1988, does not allow insurance companies to use zip codes in automobile insurance rate determination.

Instead Prop 103 requires that the driver's record be the primary determiner of rates, with good drivers given 20% discounts.

Seems like a good idea. Why should good drivers have to pay for bad drivers and why should where I live have anything to do with my insurance rates

If such a good idea, why didn’t insurance companies do it already?

Presumably, because such a method is not economically viable.
Proponents of Proposition 103 argued that there was collusion among the insurers to set higher rates, this argument was preposterous.

There are too many insurers in the state to form an effective cartel.

Many of the biggest insurers are mutuals where any "profits" are returned to the insured.

Colluding companies would still economize on costs.

Basically what this law does is to try to shift the cost of insurance from cities to rural areas -- from zip codes with high insurance costs to zip codes with low insurance costs.
B. IF PROPOSITION STRICTLY ENFORCED AND ZIP CODES ELIMINATED

State laws do not make the economic laws of supply and demand obsolete. The same competitive forces exist but in different contexts.

More important, if Proposition 103 had been strictly implemented, the cost of automobile insurance would have increased.

A strict interpretation of the Proposition does not allow a particular insurance company to charge differential rates based on zip codes.

However, this does not prevent those insurance companies that sell in rural areas from charging lower rates than those insurance companies that sell in urban areas.

So pricing is again by zip code

This increases cost of insurance
Forecast holds only to the extent that the zip-code format is undermined. The insurance commissioner initially ruled that the insurance companies could use urban density, repair costs in the area, etc. to establish rates.

These are clearly more costly than zip codes

So the major effect of the law (if strictly interpreted) is to raise the cost of insurance.

C. Epilogue

Initially, there was considerable confusion. A number of insurers stopped providing automobile insurance.

The law as interpreted is not as Draconian as expected by the writers of the proposition. Now zip are required, but they are weighted less.

Drivers in Los Angeles pay significantly more for insurance than drivers in Eureka, even when they are purchasing from the same company.
Before Proposition 103, male drivers under the age of 25 paid very high insurance rates. Proposition 103 does not allow insurance premiums to depend on age. Now premiums depend on experience. All drivers with less than 9 years driving experience pay higher rates \((25 - 16 = 9)\), and males pay higher rates than females.
30. BANKRUPTCY

A. When commitments to creditors exceed the ability of the debtor to pay, the person or firm faces bankruptcy.

   Chapter 11 of the Bankruptcy Law, firm is reorganized.

   Chapter 7, the assets of the firm are sold off.

B. Creditors

   1. Stockholders. They are residual claimants, meaning that they only have claims on resources after all other claimants have taken theirs.

   2. Secured debt held by lenders. The lender owns the property in case of default.

   3. Unsecured debt. The debt is unattached to any particular item. Lenders of unsecured debt have priority of payment before stockholders but after holders of secured debt.
C. Conflict of interest among creditors

The firm has assets worth $100 (in present value terms) and liabilities of $150 to an unsecured creditor.

The firm can take three courses of action.

Action A has 100% chance of increasing the value of the firm by $50. That is there is 100% chance that the expected value of the assets will be $150.

Action B there is 50% chance that the expected value of the assets is $180 and 50% chance that the expected value of the assets is $100.

Action C has a 50% chance of assets being worth $170 and a 50% chance of $140.
### TABLE 1

<table>
<thead>
<tr>
<th>Expected Value of Assets</th>
<th>Stockholder Expected Return</th>
<th>Bondholder Expected Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. $1 \times 150 = 150$</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>B. $5 \times 180 + .5 \times 100 = 140$</td>
<td>$0.5 \times 30 + 0.5 \times 0 = 15$</td>
<td>$0.5 \times 150 + 0.5 \times 100 = 125$</td>
</tr>
<tr>
<td>C. $0.5 \times 170 + 0.5 \times 140 = 155$</td>
<td>$0.5 \times 20 + 0.5 \times 0 = 10$</td>
<td>$0.5 \times 150 + 0.5 \times 140 = 145$</td>
</tr>
</tbody>
</table>

### TABLE 2

<table>
<thead>
<tr>
<th>Expected Value of Assets</th>
<th>Stockholder Expected Return</th>
<th>Bondholder Expected Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. $1 \times 1150 = 1150$</td>
<td>1000</td>
<td>150</td>
</tr>
<tr>
<td>B. $0.5 \times 1180 + 0.5 \times 1100 = 1140$</td>
<td>$0.5 \times 1030 + 0.5 \times 950 = 990$</td>
<td>$0.5 \times 150 + 0.5 \times 150 = 150$</td>
</tr>
<tr>
<td>C. $0.5 \times 1170 + 0.5 \times 1140 = 1155$</td>
<td>$0.5 \times 1020 + 0.5 \times 990 = 1005$</td>
<td>$0.5 \times 150 + 0.5 \times 150 = 150$</td>
</tr>
</tbody>
</table>
D. The objective of bankruptcy law is to maximize the value accruing to the assets (even if this means that the assets are sold off).

As in other areas of the law we ask what would be done if there was a complete merger with one person owning all the assets and liabilities.

Because of the conflict of interest among the various parties this may not be done.

Why doesn't the Coase theorem come to the rescue?

Bankruptcy law is to facilitate bargains

There are two interrelated questions to ask.

1) What is to be done to the firm (sell the assets piece by piece, keep running the business, or sell it to a third party)?

2) Who gets the proceeds?
E. Creditor Priority

Consider the case where the firm’s assets are $150 and its debts are $100 to the owner of secured debt and 100 to the owner of unsecured debt.

Under the priority system, the secured creditor would receive $100 and the unsecured creditor would receive $50.

If there were no priority, all creditors would receive 75 cents on the dollar (in this case $75 each).

If there were no transaction costs, either system would involve the same total costs.

However, transaction costs are not zero. Secured creditors have collateral which reduces their need for monitoring. So those who have a comparative disadvantage in monitoring choose collateral. By having collateral, they are willing to lend at lower rates.

Typically, secured debt is for a long-period of time and therefore lenders with secured debt are unlikely to have relevant information when the firm is nearing bankruptcy.
Sometimes secured debt is owned by two different entities.

For example, a firm may have borrowed $100,000 from person 1 in 1981 and $100,000 from person 2 in 1992. The firm may have used the same $300,000 machine as collateral. What if there was an unusually high rate of depreciation in value of the machine so that it was worth only $150,000 in 1998 when the firm declared bankruptcy.

Three priority schemes are possible:

(1) The first lender has priority; that is, lender 1 receives $100,000 and lender 2 receives $50,000.
(2) The second lender has priority; lender 1 receives $50,000 and lender 2 receives $100,000.
(3) Neither has priority; each receives $75,000.

Bankruptcy law has implemented the first scheme. This reduces the need for monitoring by the first lender although it increases it for second creditor (who should have a comparative advantage in monitoring since she can see the more recent activity and viability of the firm).
F. Creating a unity of interest.

i. Liquidation

Under chapter 7, the assets of the firm (either piecemeal or as a whole) are auctioned to the highest bidder for cash and then distributed according to the pre-specified priority of creditor claims. For a given priority, all creditors and stockholders would want the highest price for the assets.

Economists who believe in the market, prefer chapter 7, the auction market, to chapter 11 where legal intervention and bargaining by the participants are expected to lead to highest value..

ii. Structured bargaining.

Change the board of directors to reflect the relative interests of the creditors and stockholders. The parties then negotiate. Problems still exists because the individual member have different goals.

iii. Appointment of a trustee

The court may appoint a trustee to maximize the return to the stockholders. it may not always be easy to find a skilled and knowledgeable trustee.
iv. Convert all creditors in stockholders.

if are all stockholders, then all want to maximize the value of their stock.

G. Personal bankruptcy

When individuals cannot make payments on furniture or cars, these items may be repossessed.

The best way to help the average borrower is to give the lender strong powers.

But of course this hurts the weak borrower.
Causes of the financial crisis

1. Ineffective regulation
   A. Republican philosophy against regulation
   B. Democrat push for poor to own housing
   C. Change in regulatory structure
      SEC not Federal Reserve overseeing banks
      i. SEC was a weak regulatory body; They could not even catch Madoff
      ii. Risky choices not on the bank balance sheets (regulatory arbitrage)
   D. Large Scale derivative markets made legal during Clinton administration
      i. Derivatives are securities based on other securities. Trillions of dollars involved.
         e.g., The S&P large-cap stock index, credit default swaps, securitization of mortgage
      ii. Whenever there are innovations, individuals look for ways to make money.
         The incentives to make money are great and the ability of regulators to foresee all
         the potential problems is limited.
         An explosion in derivatives and both private and public controls were inadequate
2. Change in ownership structure of investment banks.
   Investment banks used to be partnerships but had converted to the corporate form
   So there were fewer internal controls.
   Hedge funds that are not regulated have on average not suffered as much as banks.

3. Increasing, but unknown systemic risk
   The derivative market was basically bilateral agreements.
   There was no central market like futures contracts and stock markets, which would have
   increased information and allowed for better risk assessment.
   Insuring against mortgage defaults is different from insuring against fires.

4. Implied government insurance.
   (a) People believed Fannie Mae and Fannie Mac were ultimately backed by the government.
   (b) There are also the banks and other financial institutions that "were too large to fail."
       But government did insure and thus needed to protect from moral hazard

5. General Euphoria that problems of recession and financial volatility had been conquered

6. Rating agencies also drunk the Koolaid and their services were bought by the firms being rated. If
too tough would lose business.
Solutions.

1 Short-run
When a firm is facing bankruptcy, things come to a halt.
So bankruptcy-like procedures need to be undertaken rapidly and effectively.
The government now has the power to convert debt to equity so that taxpayers do not have to bailout firms that are too big to fail.
As in all bankruptcy proceedings, the creditors (both new and old) call the shots.
With regard to GM (one worries that the government may be less interested in maximizing the value of the firm's assets than maximizing its probability of being re-elected by granting favors to certain constituencies. (e.g., auto dealers).

2. Long-run changes:
   a. Create markets for derivatives (like stock-markets) so systemic risk easier to know by market participants and the government.
   b. More regulation of financial markets. For example, raising of interest rates and capital requirements (that is, reduce leverage) to reflect and insure against increases in individual and systemic risks.
   c. Forced conversion of debt to equity (discussed above)
These policies may reduce the likelihood and extent of financial bubbles and crashes. But at the end of the day, for reasons outlined below, we will never be able to get rid of bubbles and crashes.

Errors in the bailout

   
   To a great degree bondholders and other creditors were saved by the bail-out (E.g., AIG).
   
   Saving bondholders means that bondholders are not punished for not keeping their eye on their debtors. So this is a bad idea.

b. Under Obama.

   In the Chrysler bankruptcy, the union's unsecured pension promises were paid 50 cents on the dollar while secured creditors were paid only 30 cents on the dollar.
Creative destruction, costs and benefits, and counterfactuals

Capitalist systems allow for failure. Otherwise, innovation and growth are restricted.

One could stop financial crisis of the sort that we have just experienced, by preventing any forms of debt (any leverage). But growth would be severely restricted.

When we see the market crash, we forget about the pluses of a relatively unfettered capitalist system and think that if sufficient regulation had been in place, we would have had all the growth, but none of the negative consequences flowing from regulation.

Similarly, when capital markets are performing well, one only sees the costs of regulation, but not the benefits of regulation (reducing the likelihood and extent of crashes).

Cost and benefits is the economist mantra. I think that we were erring on the side of too little regulation, but that is a marginal change in the mix.
31B. Health Care reform is mainly health insurance reform (NOT IN BOOK)

Previous system: Mixture of socialism (Veterans’ hospitals), single payer (Medicare for elderly), and private insurance

A. Most people get insurance through work.
   1. This insurance is pretax, which benefits those in higher tax brackets.
   2. Cost of insurance depends on average cost (single, married, or family).
   3. Some people choose job because of insurance benefits (see 1 and 2, above).
   4. Insurance tie-in with job makes little sense, except in context of laws that encourage it. Reduces labor mobility and increases disruption from being unemployed (but COBRA and Hippa)

B. Older people get Medicare

C. Some people buy insurance individually
   1. Major problem is pre-existing conditions, particularly those existing before an adult
      Rates are very high if insurable at all. So not really insurance
D. About 16% of adults are "uninsured"

1. Mainly young adults who have fewer medical needs and poor who are above welfare
2. Uninsured is in quotes because most of these people are partially insured by society.
Hospitals are required to treat those without insurance and without the means to pay.
These costs are borne by other purchasers (estimate is $410 a year)
and by charity (we do not like to see people go without treatment)
There are also county hospitals that are subsidized by taxpayers
3. Obamacare

A. Cannot be denied care because of pre-existing conditions. So more fully insured.

B. But this cannot work in isolation as creates adverse selection, which is hard to control. 
   E.g., do not buy insurance until need it. 
   Hence mandates. It will cost not to have insurance. 
   Reduces problems outlined in D1. 
   People will be forced to pay for society providing insurance (pay for their rescue) 
   So less subsidization of “uninsured” by insured and taxpayer.

C. Insurance pools based on location of residence (insurance through work still available)

D. Higher income subsidize lower income people; younger subsidize older
4. Republican plan (http://www.gop.gov/pledge/healthcare)

A. Place limits on medical malpractice claims
   Shift cost of malpractice to patients. Good (bad) if patients (doctors) are cheaper insurers.

B. Buy insurance across state lines
   Increases competition (good),
   But no bounds on minimal insurance (allows uninsured to remain nearly uninsured until a problem and then switch to better insurance). Hence, adverse selection.

C. Ensure access to patients with pre-existing conditions.
   Again there is the problem of adverse selection (but Republicans do not want mandates)
   States would subsidize high-risk pools for people with pre-existing conditions
   Insurance companies could not terminate people with costly medical history
   This would require fewer global changes to the way we do health insurance

D. Expand health savings accounts (allows money to be used for over-the-counter medication)

E. Permanently prohibit taxpayer funding of abortions
5. Death panels (not part of Obamacare)

A. Most of the cost of medical care is end of life

B. Do people want to pay for this?
   Best way to decide whether people want extreme and costly measures is to see whether they are willing to pay for such treatment before they know whether they will need it.
6. Why is medical care in the US so expensive and life expectancy so low compared to other developed countries?

Here are some arguments (I am not arguing whether these are valid)

A. Blame the people
   1. Obesity, illegal drugs and murder account for low life expectancy
   2. Excessive expenditure on end-of-life care
   3. Malpractice

B. Blame the insurance-medical system
   1. Too many people without insurance
   2. Not enough preventive care
   3. Insufficient co-payments (moral hazard) so people buy too much care

C. The facts are wrong
   1. High infant mortality rates because measure of live birth differs across countries
   2. If we look at particular procedures (such as surviving heart surgery), the US looks better.
32. GOVERNANCE AND ORGANIZATION

Much of the preceding analysis has been about prices.
Here, our attention is directed toward governance and organization.

Why are worker managed firms rare and investor owned firms common?
Why do franchises exist?
When do we have firms instead of markets?

Organizations work best when conflict of interest among those who govern the organization is minimized.

While corporations reduce governance problems, they increase agency problems. I will show how the interests of the manager are aligned with the interest of the stockholders.

In a later lecture, I will argue that the market for incorporation is a race to the top.

Finally, I argue that the organizational form chosen is the one that reduces opportunism and other transaction costs (both within and across firms)
A. Types of organization

INVESTOR OWNED CORPORATIONS. The owners of the corporation are stockholders, whose liability is limited to the value of the stock purchased.

WORKER-COOPERATIVES. The workers decide what and how the firm produces and it is the workers who are the claimants to any residual profits of the firm. Accounting firms.

CONSUMER OWNED. Credit unions and mutual insurance companies and REI

PRODUCER OWNED CO-OPERATIVES. Visa and MasterCard (owned by the banks until recently), and Sunkist oranges, Diamond Walnuts (until recently), and Ocean Spray Cranberry (owned by the growers).
B. The cost of governance

When there is a unity of interest, the cost of governance is greatly reduced.

If workers owned the automobile firms, there would be endless disputes.

Note that stockholders have a unity of interest

While some of these issues would arise in corporations, the issues would arise in a different arena – bargaining between union and management and within the union

ACCOUNTING PARTNERSHIPS: The accountants, not other workers, are the partners.

ESOPs (employee stock ownership plans). Employees own part of firm but their stock does not have voting rights. UAW and Chrysler

Agricultural-producer co-ops. Very specialized. Ocean Spray

Plywood worker cooperatives THE LUSTY LADIES WORKERS’ CO-OPERATIVE
C. The nature of private property and the role of community

Communists saw communal property as an ideal that fostered community

Is communal ownership of farmland a good idea? Worker/investor owned—so conflict.

What does the market tell us?

Most farmland in the United States is owned by individual families.

Most of the remaining farmland is owned by corporations.

Even the strongest cases for collective ownership rapidly dissolve into separate ownership.

Inheritance; Kibbutz
The exception: Hutterites engage in communal ownership of land.

They create a unity of interest in the following ways:

- Have very similar religious beliefs

- Have a hierarchal system where the elders (all men) are quite powerful.

- Housing and other amenities are identical

- They limit the size of their communities to 120 including children.

- They do not own TV sets or radios

- They speak in a Tyrolean-German dialect.

- They meet for religious services every evening and eat communal dinners, where they work out disagreements.
D. Limited Liability of Stockholders

Shareholder liability in corporations is limited to the value of the share.
Limited liability creates a unity of interest and reduces transaction costs.

If unlimited limited liability, then

interests would diverge
value of the stock would depend on the wealth of the stockholders.

Lloyds of London is an insurance group without limited liability.
Investors must have a lot of wealth
No governance problem since a one shot deal.
E. Debt versus Equity

Stockholders (holders of equity) have voting rights.

Does not include bondholders (holders of debt with fixed interest obligations)

Nor would we expect bondholders to have voting rights instead of stockholders.

When the firm is facing bankruptcy, bondholders have a very strong interest in the welfare of the firm; and thus common to have debt holders to have a say in the firm’s governance.
33. CORPORATE LAW AND AGENCY PROBLEMS

How do stockholders ensure that managers maximize the value of the firm?

Agency costs are the costs incurred by a corporation because its top management (agents) is not the same as its stockholders (the principals)—the separation of ownership and control.

Agency costs arise because management has different goals, information that stockholders do not have, and management is empowered to make decisions on stockholders behalf.
Agency costs are mitigated by aligning interests of the agent with the interests of the principal.

**Legal rules**

*tie salary incentives to the performance of the company.*

**competitive market for managers**

*proxy fight, take control and oust the loafers.*

*tender offer.*

If corporations with diversified stock ownership have such agency problems, why don't other organizational forms transplant the corporation.

1. The benefit of reduced risk from a diversified stock portfolio and limited liability (the maximum that can be lost is the stock value itself) may compensate for increased agency costs.

2. Parallel problems arise in other organizational forms.
A. Private Choice as a Guide to Optimal Choice

The market choice is in general the best guide to the optimal choice

Corporate laws, laws of the state where the corporation was chartered, and the legal rules of the exchange where the corporation is listed.

If the articles of incorporation and bylaws have inefficient rules, then long run profits will be reduced. And, investors will pay less for the stock in the first place.

Actual charters would be a poor guide under the following three scenarios:

(1) Agency failure—managers rather than owners decide the nature of the articles of incorporation;

(2) asymmetric information—investors are prone to mistakes; and

(3) third party effects.
B. Comparative Advantage

Who is best able to deal with bads -- firms or the federal government.

We would expect that rights would be allocated to managers if and only if these rights were more valuable to the managers than to the stockholders.
C. Tender offers

Tender offers present shareholders with the opportunity to sell some or all of their stock at a premium above the market price.

Tender offers typically occur when the managers are hostile to a merger.

Tender offers involve high transaction costs.

D. Proxies

If managers perform poorly, then investors with a non-trivial amount of stock can organize a rival slate of directors and ask for proxies from other shareholders.

Most of the benefit falls on passive stockholders
E. Mergers

A merger takes place with the consent of both the board of directors and the stockholders in contrast to a tender offer where only the target firm's shareholders need to approve.

Ultimately it is the market for corporate control via proxies, mergers and tender offers that maintains the alignment of manager behavior with the shareholder interest in maximizing the return on their investments.

Corporate rules of governance and the courts are too unwieldy to insure profit maximization by themselves.
F. Examples

Why are Co-op grocery stores rare in the US

- Individual returns small
- No unity of interest
- No market for control

Borrowing on human capital: Stocks or bonds?

- Adverse selection

  - Australia; high earners subsidize low earners

Ancient Greek oarsmen hired manager

Old time Pirates

Somali Pirates

Class action suites and agency problems
34. INSIDER TRADING

A. There are federal regulations against "insider trading."

Corporate officers are not allowed:

i. to sell short (promising to sell stock which they do not presently own at some time in the future),

ii. to buy or sell stock based on inside information

iii. to both buy and sell stock within a six month period even if the transactions were not a result of insider information

B. Arguments against insider trading:

i. Not a "level playing field".

ii. It encourages managers to invest in areas where insider information

iii. Managers may manipulate the performance of the firm in order to make good on bets
C. The market answer

i. We did not observe states with similar rules against insider trading before the federal rule was promulgated.

ii. We do not observe many firms incorporating with rules against insider trading.

iii. Salaries, bonuses, office size, and other terms of employment are generally assumed to be best left up to private negotiation.
D. Types of insider trading not allowed by corporate charters and state rules

i. If corporation A intends to make a tender offer for corporation B, an insider of corporation A is not allowed to buy stock in corporation B.

ii. Similarly, an insider is not allowed to buy land which the corporation intends to purchase. These rules are often seen in state charters and in articles of incorporation.

iii. We also observe rules against insider trading for accounting firms (and allied professions) and business newspapers, such as the Wall Street Journal.

iv. Looking at the regulation of insider trading from a broader view, insider trading is allowed. If I have information about the performance of my firm, I may have very special information about other firms.
E. Selling short

Greatest potential problem from insider trading is selling short (betting market will go down) but there have been no recorded cases (even when short-selling was allowed).

Furthermore, short selling in other firms may create similar problems
F. Why insider trading is good

(i) It tends to make the stock less volatile and therefore, on average, higher priced.

(ii) The cost of information acquisition by stockholders is reduced and therefore stockholders are better off.

(iii) The Coase theorem applies here.

G. Concluding Remarks

i. It is not up to the economist to find the costs and benefits of insider trading.

ii. Rather, it is up to the economist to determine whether the market has the appropriate incentive structure for choosing the optimal outcome.
35. OPPORTUNISM and the STRUCTURE OF RELATIONSHIPS: MCDONALD's, THE MAFIA AND MUTUAL OF OMAHA

A. The potential for opportunism
   1. Arises because of *specific investment*
   2. Turns into a *quasi-bilateral monopoly* situation, even if the pre-investment situation was characterized by perfect competition.
   3. Potential for ex post bargaining over these *quasi rents*

B. Examples
   1. Widgets
   2. The Navajo Generating Station cost $650 million dollars to build
   3. Employment contracts

C. How to prevent
   1. Reputation
   2. Avoidance of specific investment
   3. Allocate to side least likely to act opportunistically
   4. Long-term contract and use law to enforce
   5. Vertical control (because law costly and imperfect). Hierarchy v. market
D. Franchising (McDonald’s)

1. Franchising is a complicated long-term contract. 
   There are two profit maximizers: the franchisor and the franchisee.

2. Why doesn't McDonalds own all of its outlets rather than franchising?

   Because of comparative advantage and transaction costs.

   McDonalds is better at training and engaging in collective advertising, 
   while the local owner has a comparative advantage in managing.
3. Why doesn't McDonald's sell the off the right completely.

(a) To prevent opportunism by the franchisee.

The cost of an inferior product falls on other franchisees.

All franchisees are better off in an ex ante way if they commit to police themselves.

McDonalds Corporation is doing quality monitoring on behalf of the franchisees and also on behalf of itself so that it can sell more franchises in the future.

(b) To prevent opportunism by the franchisor

McDonald's receives royalties. Therefore interested in monitoring franchisees for quality, advertising and developing new products.

If it received all of the money upfront, the franchisees would have to rely on the courts to enforce the contract rather than self-interest.
4. Why are True-Value hardware stores independently owned?
   - Products guaranteed by manufacturer
   - Repeat customers--few spillover effects

5. Why are Safeway stores owned by corporation?
   - Centralized distribution is key.
D. Organized Crime

Criminals and criminal organizations cannot rely on the courts for the enforcement of their contracts -- illegal contracts cannot be enforced.

Therefore substitute mechanisms must be used to prevent opportunism.

Often have family and grammar school ties.

Opportunism is less likely in long-term relations.

Initiation into gang usually requires the person to carry out a crime

Often initiation requires an honor code and a lifetime commitment to the organization.

Most important way of curbing opportunism in the criminal world is the use of physical violence, including murder, for breach of contract.
However, it is also the case, that murder may also be a method of breach. Unlike the legal world, there is no neutral third-party enforcers of illegal contracts.
A constitution outlines the Mexican Mafia’s internal governance institutions (Blatchford 2008, 44; United States v. Aguirre et al. 1994, 7):

1. A member may not be a homosexual.
2. A member may not be an informant.
3. A member may not be a coward.
4. A member must not raise a hand against another member without sanction.
5. A member must not show disrespect for any member’s family, including sex with another member’s wife or girlfriend.
6. A member must not steal from another member.
7. A member must not interfere with another member’s business activities.
8. A member must not politic against another member or cause dissension within the organization.
9. Membership is for life.
10. Membership mandates assaulting/killing all drop outs.
11. The Mexican Mafia comes first—even before your own family.
Criminal organizations face many of the same economic issues that legitimate organizations do.

Certain types of crimes involve economies of scale and scope.

Visible services such as prostitution and drugs need to attract customers compared to invisible services such as theft.

Organized crime provides protection from police for visible services rather than invisible services.

Illegal business are especially prone to extortion since cannot go to police.

Organized crime is less likely to extort when business becomes legal (gambling and liquor).

Makes relationships with other long-term entities.

Contracts are enforced by specific monitoring. Bars are monitored by the amount of liquor they purchase. Liquor distribution thus often makes sense for organized crime.
E. Mutuals

A mutual is an organizational form where the customers own the company.

In general they are not very successful in competition with investor owned companies even though these mutuals are ostensibly set up for the customer while the investor owned companies are organized to maximize the profits of their shareholders.

A reason for their general lack of success is the absence of a market for corporate control.

Mutuals are the most successful in finance (credit unions, insurance companies). If the managers are not doing a good job, the customers withdraw their money.

In banking and insurance, the customers are often risk averse.

If the insurance company is a mutual, it means that the customers prefer less risk but a lower rate of return in comparison to the owners of a corporation who are risk neutral because of their diversified portfolios.
36. THE ORGANIZATION OF THE SENATE AND HOUSE OF REPRESENTATIVES

All organizations face same problems but to different degrees

1. Agency problems

Legislators are the agents of the voters, but they may follow their own interests

How are agency costs mitigated?

2. Governance costs increase dramatically when there is not a unity of interest.

Legislators represent populations with different ideologies and concerns.

How do legislatures reduce governance costs?
3. Opportunism (related to point 2)

A majority may take advantage of the minority (e.g., pork barrel projects)

How do legislatures reduce this kind of opportunism (common pool problem)?
Democracy compared to totalitarian governments.

Governments have the power to coerce: much of politics is about distribution

DEMOCRACY

Democratic politicians gain office by getting the most votes.

A presidential candidate with a platform composed of an inefficient set of policies can be beaten by a candidate with a Pareto superior platform.

Those who lose in the political process will not be soothed by knowing that their losses were efficiently redistributed.

But those who are dissatisfied will be in the minority.
AUTHORITARIAN REGIMES

Other things being equal, the dictator would like to grab as much pie for himself;

No benefit to the dictator when some of the pie is wasted. However, this is a weak force.

Political competition is greatly attenuated

Dictator unlikely to give up power if incompetent

Replacing him against his will often involves high transaction costs

Censoring and propaganda increase political transaction costs

To maintain political power, economic growth may be stifled

Reduce communication so cannot be overthrown

Prevent alternative sources of power

Use political power to maintain economic power

Property rights are dependent on who is in power rather than the rule of law,
A. Electoral Competition Controls Agency Costs

Legislators lose their jobs if they stray too far from the interest of the median voter.

Opposition keeps close track of the incumbent’s voting record and statements

Competition is much fiercer than in ordinary markets.
B. The Coase Theorem Applied to Legislatures

Congress is structured to reduce negotiation transaction costs.

Most legislation requires only a majority rather than unanimity.

Congress is very small in comparison to the overall population of the United States. Procedure that enhance the legislature’s ability to come to an agreement.

House germaneness rule

Political parties also reduce transaction costs by facilitating trade

Coase theorem applied to legislatures

When political transaction costs are low, any inefficiency negotiated away.
C. Mitigating the Common Pool Problem

Each congressman pushes for political pork regardless of the financial cost to other districts.

So how does Congress mitigate this common pool problem?

1. Small size of Congress reduces transaction costs, allowing Pareto-improving

2. Logrolling (vote trading over issues) occurs only if the parties are made better off.
3. Committee Structure and Committee Assignments

Agriculture Committee, Armed Services Committee, and a Budget Committee

Members of the agricultural committee come from agricultural districts

The political party exerts hierarchical control in making committee assignments.

Budget and Appropriations balances competing demands of specialized committees

Membership on control committees reflects preference of median congressman

There is less opportunism when the goals of the agent and the principal coincide.

Congress can always vote down a committee bill.

The Constitution grants house and senate the right to determine its internal rules.

Congress would not design a committee system that is inefficient.
HOMEOWNERS’ ASSOCIATIONS

Developers of large-scale housing tracts provide single and multiple residences in styles and quantities that maximize profits. They also provide rules and regulations (known as restrictive covenants) that homeowners desire. The problem with rules is that overtime conditions change, and the rules and regulations need to change also. For example, concern for fire might result in ceramic tiles being preferred over wood shingles. Homeowner associations are set up to deal with such problems. To reduce transaction costs, voting on many of the regulations are by majority or supermajority rule. However, to prevent rent-seeking, there are limits on what the homeowner association can do. For example, a majority of homeowners cannot decide to sell someone’s house against their will.
Zoning boards can be seen as a parallel solution to homeowner associations when the parcels are separately owned and the transaction costs of merger are prohibitive. The reason why zoning boards rather than courts decide spatial arrangements is that there are multiple rather than two sides involved. Single housing units, duplexes, apartment houses, as well as grocery stores and office buildings all have to be located somewhere. Courts are set up to decide two-sided disputes. Multiple-sided disputes need a different forum. Hence, there has been a withering away of the common law of nuisance and a shift to city councils and their appointed bodies as arbiters of spatial arrangements.
IRRATIONALITY OF MAJORITY RULE and ROBERTS RULES OF ORDER

One requirement of rationality is that preferences are transitive. That is, if X prefers A to B and B to C, then rationality requires X to prefer A to C. Unfortunately, as shown in chapter 3, collective decisions need not be rational even if individuals are. Consider the following preference relationships by voters X, Y, and Z:

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<th>X</th>
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<td>1</td>
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<td>3</td>
<td>C</td>
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Under majority rule, an election between A and B would find A to be the winner; an election between B and C would find B to be the winner, but an election between A and C would find C to be the winner. Hence, there is cycling rather than transitivity.
If there were no rules regarding voting on resolutions at a meeting, there would be endless cycling as first B would be offered as a substitute for C with B winning the ensuing vote, then A winning over B, C over A, B over C, and so on. Robert’s Rules of Order for deliberative assemblies does not allow such substitutions, thereby ending the cycling. This however gives great power to the agenda setter.
Federal governments: where the central government has certain powers and the state and local governments have a different set of powers.

Why do we have federal governments?

Which activities are allocated to the central and which to the state and local governments?

Transaction costs broadly defined provide much of the answer.

Benefit of centralization

Take advantage of economies of scale (especially, military) without having to rely on contract and constant renegotiation.
Promote coordination and prevent prisoner dilemma games that might arise if the states were completely sovereign.

However, uniting states composed of different people with different preferences and endowments increases the problem of governance.

centralization increases the monopoly power of the center to impose its will on people with opposing preferences.

Federalism is an institution that tries to achieve simultaneously the advantages of small and large governmental units – strong enough to resist external enemies and coordinate actions between the states, but limited enough so that the center does not intrude on local autonomy. The key to understanding the organization of a federal government is to determine which activities belong in the center and which activities are best left to the subunits.

the central government should be in charge of waging war and printing money. We know turn our attention to more subtle issues.
A. The Role of the Central Government

Federalism is a form of dual sovereignty, similar to franchise.

Like multilayered firms, federations will not function effectively unless incentives are properly structured. The central design challenge is to structure incentives so that local politicians have strong incentives to serve their constituents, while minimizing incentives and opportunities to shift costs onto other constituencies.

1. Maintaining Free Trade

The interfering and unneighborly regulations of some States, contrary to the true spirit of the Union, have, in different instances, given just cause of umbrage and complaint to others, and it is to be feared that examples of this nature, if not restrained by national control, would be multiplied and extended till they became not less serious sources of animosity and discord than injurious
impediments to the intercourse between the different parts of the Confederacy. Hamilton 22 (p. 144) Federalist Papers complaining about the Articles of Confederation.

Economists love free trade both within and among countries.
One role of the federal government is to maintain free trade within the federation. Article II, section 10 of the U.S. Constitution disallows states from imposing export or import duties without the consent of Congress unless absolutely necessary for executing inspection laws.


Hale v. Bimico Trading, Inc., 300 U.S. 375 (1939), the court held unconstitutional a Florida statute, which imposed an inspection fee sixty times the actual cost of inspection on cement imported into the state because that statute excluded locally produced cement from all inspection and inspection fee requirements.

One might ask why the court does not allow the states to decide since presumably the states would be interested in promulgating optimal contracts.
2. Reducing Cost Shifting unto Other States

Consider the following problem. An accident between a U.S. government vehicle and a New York driver takes place in New York State. York.

the U.S. Tort Claims Act requires that the trial be held in a federal court where the judge is not beholden to the people of New York.

Now a similar problem arises if the accident involved a vehicle owned by a Texas corporation instead of the US government.

A situation where this requirement was not met was in World-Wide Volkswagen Corp. v. Woodson, 444 U.S. 286 (1980).

3. Dealing with Conflicting State Laws

Which state’s laws should take precedent when the laws of different states are in conflict?
Again, a transaction cost analysis provides the answer.

a driver from Alaska runs into a pedestrian from Florida while both are in California.

Estate are administered under the law of the decedent’s domicile, not the heirs’.

The laws that regulate a married couple’s relationship (say community property) are the state of domicile, not the state where they happen to invest (Veazey v. Doremus, 510 A.2D 1187, 1986). And if one spouse moves to a new state, that unilateral act cannot change the legal relationship – the law of the original common home state continues until both spouses move elsewhere.

B. The Benefits of State and Local Government Competition

Give taxpayers what they want
Competition among jurisdictions means that a local jurisdiction’s ability to tax mobile factors is very limited. In a nutshell, immobile voters would not want to impose taxes on mobile capital, even if the owners of this capital are outsiders with no voice whatsoever in local politics.

C. Redistribution and Political Structure

Because capital and labor are mobile, the ability of state and local governments to redistribute income is very constrained. An individual jurisdiction may tax the rich to subsidize the poor, but this policy will neither reduce the net income of the rich nor raise the net income of the poor when both groups are completely mobile. This repeats a theme brought up throughout the book regarding the difficulty of redistributing wealth.

Redistributive politics is shifted upward, to encompass a larger geographical area, where such transfers may be more effective.

For example, in the US, fiscal transfers from the federal government subsidize state administered welfare programs like AFDC (Aid to Families with Dependent Children) and Medicaid.
38. THE INTERNAL ORGANIZATION OF THE FAMILY:
ECONOMIC ANALYSIS OF PSYCHOLOGICAL ADVICE

Economic analysis of the law provides efficiency explanations for the allocation and protection of entitlements within the larger society.

Advice provided by clinical psychologists for allocating and enforcing entitlements within families has the same economic underlying logic.
A. BOUNDARIES

“Boundary systems are invisible and symbolic "fences" that have three purposes: (1) to keep people from coming into our space and abusing us, (2) to keep us from going into the space of others and abusing them and (3) to give each of us a way to embody our sense of "who we are.” (Mellody, et. al., p. 11)

People with damaged boundaries are labeled “co-dependent.”

Boundaries play the same role in personal relationships as property rights play in economics.

The therapeutic method is to set limits rather than make war (cross boundaries).

B. JOINT RESPONSIBILITY

Everyone has control over his/her behavior.

X cannot blame Y for X's drinking and Y cannot blame X for Y being a victim and staying in an abusive situation. Y has chosen to be a victim.
C. CHILD REARING AND THE NEGLIGENCE RULE

Relationships can be structured to minimize externalities.

Boundaries are implemented via the use of a negligence rule.

1. THE NEGLIGENCE RULE AND MINIMIZATION OF TRANSACTION COSTS

It is important to understand the difference between 'behavior and consequences' and 'Crime and Punishment.' The consequences should be, if possible, a reasonable follow-up related to what happened ... (Mellody, et. al., p. 140)

Let us say your son in junior high starts to forget his lunch every day. He calls you, his mother, and you take his lunch. To stop this behavior pattern, you sit down with him and say: “Look Charley, the normal consequences of not making arrangements for lunch is that you go hungry." Then when he forgets his lunch the next day and calls you again, you say. "I'm sorry. ... The normal consequences of your not taking lunch with you is for you to be hungry. I am not bringing your lunch.” (Satir, 1972, quoted in Mellody, et. al., p. 140).

Parents should change their own behavior rather than try to change their child's behavior.

This method respects Charley's boundaries

Charley learns what his boundaries are
How to make decisions
Take responsibility in the absence of others.
2. Assume that a price system is feasible.

Mother could charge Charley a price equal to marginal cost of delivering lunch

In this way, the mother would be *indifferent* to Charley's choice.

System mirrors liability rules (where the victim is made whole) in contrast to Pigovian taxes or punishments (which try to change the criminal's behavior but leave the victim uncompensated).

3. Charley may not have enough money to bribe mom. But there may be close substitutes.

Don't deliver the lunch closely emulates a price system in its effect.
4. Compare this to the punishment alternative. Mother delivers the lunch and then, as punishment, does not let him go out on the weekend.

    Having Charley stay at home does not compensate mother.

    Therefore, mother is no longer indifferent to Charley's choices.

    If he forgets his lunch and she delivers it, she faces an uncompensated social cost. Charley's choice is imposing a negative externality on mother.

    Mother is strongly against this alternative from happening.

    Hence her interest is in controlling Charley's behavior, not in giving him a free choice.

    A punishment system generates externalities and strategic behavior.
D. THE CONCERN FOR LONG-RUN INCENTIVE EFFECTS

The little girl asks her mother for a candy bar; the mother says, "No." The child begins crying and complaining, and the mother says, "If you think I'm going to buy you candy when you make such a fuss you have another thing coming, young lady!" But the child escalates her tantrum, getting louder and louder. Finally, the exasperated and embarrassed mother gives in, saying, "All right, if you quiet down first, I'll buy you some cookies."

Child is learning that violating property rights (boundaries) is a way of getting what she wants.

Offering a cookie to a child is likely to stop the tantrum; but long-run incentives are the opposite.

Why don't child psychology texts recommend slapping the child?
E. SIBLING FIGHTING AND JOINT OUTPUTS

In a fight it is difficult to establish who is guilty. It is not the result of the misbehavior of one child -- they all contribute equally to the disturbance, which is the result of their combined effort. ... The children are ... coordinating their efforts whether for the welfare of the family or for the furtherance of its tensions and antagonisms. (Dreikurs and Solz, 1987, p. 261).

Fighting is a joint output.

If the parents protect the child that ends up crying, then children will use crying to get their way;

If the parents protect the abuser, then children will learn to abuse others' boundaries rather than find shared solutions to problems.

Furthermore, by interfering the parent may also be an unwitting input. Perhaps both children have motives to get the parent's attention.

Constant intervention by parents shifts the cost of dispute resolution onto the parents and prevents the siblings from learning how to resolve the disagreement on their own.

If an older child truly terrorizes a younger one
Sending children back to their individual rooms is a good strategy.
F. ALTRUISM

Conflicts arise between altruistic parents and their children because

Their utility functions are not perfectly aligned
And their discount rates differ.

Parents must allow their children to have minor harms because learning is costly but necessary for a child’s long-run happiness.

Learning is slow and requires lots of practice.

Children learn by doing and emulating.

They only learn to be responsible adults by taking on responsibility for their choices.

Parents must protect their children from major harms that reduce a child’s long-run happiness

Altruistic parents have their eyes on the long-run – they derive utility from their children maturing and becoming responsible adults.