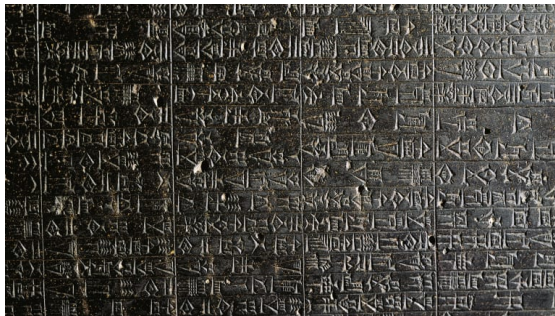


## Econ 300 - Institutions and Development



*If a herdsman, to whose care cattle or sheep have been entrusted, be guilty of fraud and make false returns of the natural increase, or sell them for money, then shall he be convicted and pay the owner ten times the loss.*

– *Code of Hammurabi, Law 265, 1754 BCE*

*If any one be too lazy to keep his dam in proper condition, and does not so keep it; if then the dam break and all the fields be flooded, then shall he in whose dam the break occurred be sold for money, and the money shall replace the corn which he has caused to be ruined.*

– *Code of Hammurabi, Law 53, 1754 BCE*

## The basics:

- Office: 254 Tyler Hall
- Email: jmparman@wm.edu (expect response in under 24 hours)
- Phone: 757-221-2852 (email is probably easier)
- Office hours: Mon 3pm-5pm, Thu 10am-noon

- We will have a course website on [blackboard.wm.edu](https://blackboard.wm.edu)
- Right now you can find the syllabus, these lecture slides, and two folders for readings on the website (all under 'Course Files')
- Lecture slides will typically be posted half an hour before lecture
- Any future handouts will also be posted under 'Course Files'

# Course Prerequisites

Students should have completed Econ 101 and Econ 102. I will assume a basic knowledge of economic terms and concepts.

- There is no required textbook for the course
- Readings, both required and non-required, will be posted on Blackboard
- I will maintain a reading list on Blackboard noting which readings are required
- I will update you at the start of each lecture on where we are in the course outline and which readings you should do for the next classes

- The readings are a mix of non-technical articles for a general audience and academic journal articles
- The journal articles are written for an audience of professional economists which can make them fairly dense
- Don't get overwhelmed by the details, focus on the big picture
- Try to focus on the following questions when doing a reading:



- What question is the author attempting to answer?
- Why is this an important question?
- What does previous research have to say about the question?
- What sort of evidence does the author rely on?
- Are there any drawbacks or limitations to this evidence?
- What conclusions does the author reach?
- What are the implications of these conclusions for larger economic questions?

- Final grades will be based on class participation (10%), quizzes (30%), three visitor response papers (10%), a group project (20%), and a final exam (30%)
- The overall course grades will be curved to be consistent with the typical William & Mary grade distribution
- Students will have one week after graded material is first returned to raise any issues about grading, after that the recorded grades are final
- Late papers and projects will be accepted but will incur a penalty that increases with each additional day the assignment is late

# Class Participation

- Your class participation grade will be based on participating in in-class polls
- We'll be using PollEverywhere to conduct the polls
- Your grade is simply based on the percentage of polls you participate in (there are no correct or incorrect answers)
- We'll try out the technology in Friday's lecture to make certain that nobody has trouble submitting responses

- Quizzes will also be in class and conducted electronically (either with PollEverywhere or Blackboard)
- They will cover questions related to assigned readings and economic theory presented in earlier lectures
- I will notify you at least one lecture ahead of time when a quiz is coming and what the quiz will cover
- We will typically have one quiz every two weeks
- If you must miss a quiz for an excused absence, your other quiz scores will be averaged to replace the missing score
- You must notify me of the absence before the missed lecture

**Ceremony** *occurs in many forms and arenas, spanning the natural and cultural, the secular and sacred, and grounding the legitimacy of authority. The performance of ceremony expresses the accepted social order -and can mark transitions in that order - for individuals, groups, and nations. Ceremonies may include religious rituals, such as baptism, marriage, and pilgrimage, and state rites, such as the inauguration of political leaders and the execution of criminals. They may vary in scale from large public rites, such as the commemoration of important historical events or the opening of a new city shopping mall, to small private ceremonies, such as the celebration of a wedding anniversary or a funerary ritual.*

# Coll 300 - The Theme and Speakers

- AFST 330 - Arts in Africa
- AMST 350 / GSWS 392 / HIST 312 - American Sexualities
- COLL 300 - Story and Ceremony
- FREN 385 - Francophone African Lit I
- GOVT 322 - Global Environmental Governance
- GOVT 391 - The Politics of Inequality
- JAPN 320 - The Japanese City
- LAS 390 - Music, Myth and Possession
- PSYC 356 - Health Psychology
- PSYC 470 - Adolescence

- **Anderson Silva Argolo, Urania Oliveira Rodrigues, Patrick Santos Da Silva** - practitioners of Afro-Brazilian Candomblé
- **Selena Fox** - priestess and co-executive director of Circle Sanctuary (and W&M alum)
- **Setsuko Thurlow** - survivor of the 1945 atom bombs

- You will need attend each visitor's main event
- After the event, I will post a prompt for a 500-word response paper based on what the visitor spoke about and how it relates to our course
- We will also have two in-class visits from the speakers (these will be joint with Govt 322)
- A major goal of these visits is to stretch your perception of the world by being exposed to very different experiences, viewpoints, and subjects



- The other big piece of Coll 300 is the academic festival
- All students taking on-campus Coll 300 present work at the festival at the end of the semester
- There are posters, slideshows, performances and a wide variety of other types of work
- We are going to be working in groups to create interactive games related to institutions and their influence on economic outcomes

# Coll 300 - Academic Festival



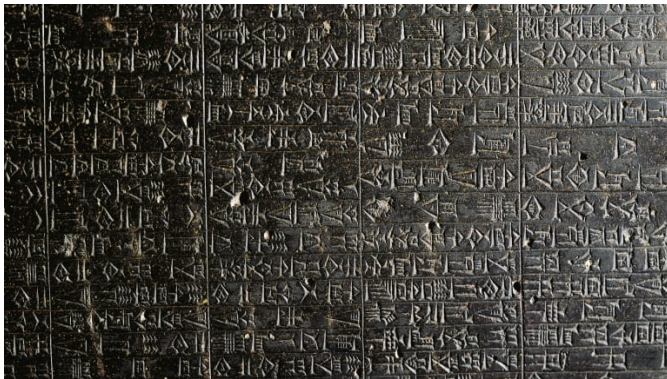
- You'll be recreating the rules and cards for the Game of Life
- Your modifications will be based on real institutions with real economic consequences
- You'll link your modifications to the academic literature
- The end product will be a new set of board games that can be played by academic festival visitors
- The game pieces will link to your research
- We'll go over all of the details in the second week of lecture

Very important: Every student must attend the visitor events and the academic festival, even if you have already satisfied your Coll 300 requirement.

# Schedule

| <b>Date</b>                | <b>Event</b>                  |
|----------------------------|-------------------------------|
| January 30                 | Group assignments             |
| February 27 (5pm - 6:30pm) | Afro-Brazilian Candomblé talk |
| March 27 (5pm - 6:30pm)    | Selena Fox talk               |
| April 3 and 5              | Group work days (no lecture)  |
| April 10 (5pm - 6:30pm)    | Setsuko Thurlow talk          |
| April 17                   | Group game modifications due  |
| April 19, 22 and 24        | In-class group presentations  |
| April 24 (5pm - 7pm)       | Academic Festival             |
| May 2 (9am - noon)         | Final exam                    |

# What are Institutions?



# The Origins of Institutions



# Institutions and Long Run Development





# Customs, Traditions, Ceremonies and Social Norms



# Academic Festival Projects



# For Next Class

- For Friday's lecture, read the two editorials on the Knee Defender by Josh Barro and Damon Darlin
- They are in the required readings folder on Blackboard
- They are short but will set up the interactive poll we are going to try out on Friday
- Please bring a device that can access PollEverywhere (a laptop, tablet or smartphone would be fine)
- Let me know if bringing a device presents any problems

# Institutions and Development



Prince Al Waleed's 747, no Knee Defender needed

- No lecture or office hours on Monday (Martin King Luther Jr. Day)
- For the next few lectures, we'll discuss broadly what institutions are and why they matter for the economy
- Today, we'll talk through the Knee Defender editorials you read and do some interactive polling for motivation
- For next week, you should read the following:
  - North, D.C. (1991) "Institutions" *Journal of Economic Perspectives*
  - North, D.C. (1993) "Economic Performance Through Time" *Nobel Prize Lecture*

# The Knee Defender

- We're going to start with a case study to think about what markets can and can't do for us and where institutions might help (or not)
- This will help motivate our more detailed discussion of definitions and so on next week
- At the heart of this example is the contested space behind an airplane seat
- First, a quick history of legroom

# The Knee Defender



Image from the Pan Am Historical Foundation

# The Knee Defender

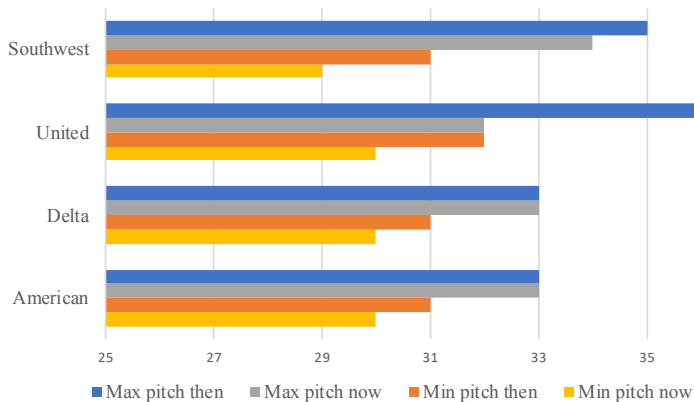


Image from the Chicago Tribune



# The Knee Defender

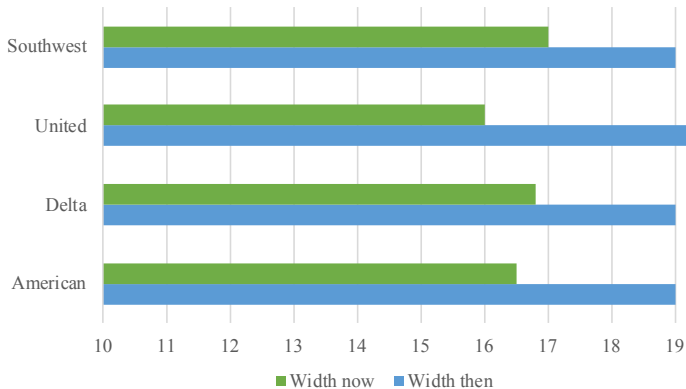
## Legroom 30 years ago and today



Figures are from The Telegraph

(<https://www.telegraph.co.uk/travel/comment/plane-seats-legroom-shrunk-worst-airline/>)

## Seat width 30 years ago and today



Figures are from The Telegraph

(<https://www.telegraph.co.uk/travel/comment/plane-seats-legroom-shrunk-worst-airline/>)

# The Knee Defender



Image from the New York Times

# The Knee Defender

- Enter the Knee Defender in 2003
- The plastic device latches onto the tray supports and stops the individual in the next seat from reclining
- Chaos ensued including fights on planes and much debate in the media
- Now the Knee Defender is banned on all major US airlines and we are back to square one
- Let's think about the economics of this

# Let the Polling Begin

- Let's start by doing some class polling
- In a second, we'll start with the polls but first everyone needs to be registered
- On any internet-connected device, go to:  
<https://www.polleverywhere.com/login>
- Enter your W&M email address and select the link to log in via Single-Sign On
- If the Single-Sign On link doesn't show, just enter your email and hit next to get the option to sign in through William & Mary
- **Important!** If you don't use your W&M email, you won't get credit in Blackboard for poll participation

# The Economics of Leg Room

- What we have here are potentially inefficient outcomes from bad institutions
- There isn't really a standard market for leg room
- Josh Barro suggests paying to keep someone from reclining, this is a sort of market
- But it has a couple of issues:
  - People may be very hesitant to initiate this sort of transaction
  - People are not clear who should be paying who

# The Economics of Leg Room

- Let's start the notion of who should be paying who
- This brings up one of the most commonly discussed institutions, *property rights*
- Does the person in front have the right to recline the seat?
- Does the person in back have the right to the space?
- Can these rights exist at the same time?
- What is the optimal way to assign property rights?

# The Coase Theorem

- In law and economics, this gets at something commonly called the Coase Theorem
- The basic idea is that if there are no transaction costs, assigning property rights will lead to an efficient outcome regardless of who we assign the rights to
- This raises an important question central to the rest of this class, what do we mean by efficient?



# The Coase Theorem

- Let's think about two ways of defining efficiency
- An outcome is Pareto efficient when there is no way to make one agent better off without making another agent worse off
- Alternatively, we could say an outcome is efficient if total surplus is maximized
- Note that total surplus includes any consumer surplus, producer surplus, government revenues, and externalities
- To what extent are these definitions the same?

# The Coase Theorem - An Example



Brayton Point Power Station, Somerset, MA

# The Coase Theorem - An Example

- Suppose that a factory pollutes a river and that pollution harms farmers downstream
- The factory earns  $\pi_0$  in profits, the farmers lose an amount  $H$  from their usual profits of  $\pi_f$  due to the pollution
- The factory could eliminate the pollution by installing a filter that costs  $C$
- If nobody has rights to the river, the factory will simply pollute and combined profits will be  $\pi_0 + \pi_f - H$
- What if we assign rights to the farmers?

# The Coase Theorem - An Example

- Farmers can force the factory to not pollute, or they can accept a payment to allow pollution
- Since they will be harmed by  $H$ , that payment must be at least  $H$
- Since the factory can always install a filter for  $C$  to avoid paying  $H$ ,  $C$  is the most the factory is willing to pay
- Now we have two possibilities:

$$C > H$$

$$C < H$$

# The Coase Theorem - An Example

$$H > C$$

- In this case no deal can be struck, the factory will install the filter and earn  $\pi_0 - C$
- The farmers are spared the pollution and earn their regular profits  $\pi_f$
- Total profits are now  $\pi_0 - C + \pi_f$ , giving us the following change in total profits:

$$\Delta\pi = H - C$$

- Since  $H > C$ ,  $\Delta\pi > 0$  and we have a more efficient outcome

# The Coase Theorem - An Example

$$C > H$$

- In this case a deal can be struck, any payment between  $H$  and  $C$
- Let's say they split the difference and settle on  $\frac{C+H}{2}$
- So factories don't need to install the filter, but they do make a payment to farmers and farmers suffer from pollution but receive that payment
- New total profits are:

$$\pi_{\text{total}} = \left( \pi_0 - \frac{C+H}{2} \right) + \left( \pi_f - H + \frac{C+H}{2} \right)$$

- This is where we started,  $\pi_{\text{total}} = \pi_0 + \pi_f - H$ , but that's where we should be since  $C > H$

# The Coase Theorem - An Example

- Now let's switch the property rights, the factory gets the rights to the river
- Farmers would need to pay the factory owner to stop the pollution
- The factory owner would demand a payment of at least  $C$  to install the filter
- Farmers would be willing to pay up to  $H$
- Our two cases:
  - $H > C$ : a deal is struck, the filter is installed
  - $H < C$ : no deal is struck, the river is polluted

# The Coase Theorem - An Example

- Note that these are the same outcomes as before in terms of whether the filter is installed
- This means we reach the same efficient outcomes
- Payments go in different directions but that doesn't matter when adding up total profits (they always cancel out)
- It does matter (a lot) for how happy farmers are relative to factory owners
- This gets to questions of *equity*, the fairness of the distribution of surplus
- To explore further, let's take the discussion back to our poll results and the two editorials



# Property Rights, Efficiency and Equity

- Recall our condition when setting up the Coase theorem, *“if there are no transaction costs”*
- This is a big, big deal
- It can be incredibly costly to ask the disgruntled business traveller in front of you to strike a deal
- Part of why it is costly gets at a different sort of institutions, social norms
- These can shape behavior and outcomes just as strongly as a formal institution like property rights
- Throughout this class, we'll be thinking about the roles of both formal and informal institutions

# The Academic Festival



Click [here](#) for a photo gallery of past Academic Festivals.

- Today we'll go over the details for the group project before returning to our knee defender example
- For the next lectures, we'll discuss broadly what institutions are and why they matter for the economy
- For Friday's lecture, the relevant readings are still:
  - North, D.C. (1991) "Institutions" *Journal of Economic Perspectives*
  - North, D.C. (1993) "Economic Performance Through Time" *Nobel Prize Lecture*
- For next week, also read North and Thomas (1970) "An Economic Theory of the Growth of the Western World"

# Announcements

- Check your poll participation on Gradebook to make certain that your answers were recorded (note this poll does not count toward grades)
- A quick note about excused absences
- As discussed in the first lecture, any quizzes or polls missed for an excused absence will be replaced with an average of your other scores
- For this to happen, you need to notify me of the absence ahead of time
- Notifications should be done through the 'Submit Excused Absence' link on Blackboard
- Missing grades will be replaced at the end of the semester based on the data compiled through that link

# The Academic Festival Project



# The Academic Festival Project

- You will be working in groups to modify *The Game of Life*
- Groups will consist of ten students
- Each group will create a new set of rules for the game
- Each group will also create 20 action cards
- We'll combine everyone's rules and cards to make playable versions of the games at the Academic Festival
- Detailed instructions are given on Blackboard

# The Rules of Life

## STOP! SPACES

When you come to a STOP! space, stop your token there even if you have moves left. Each STOP! space is different.

**Graduation STOP!**  
Take the top two College Career cards from the deck. Choose your favorite, and place it face-up in front of you. That's your job! Return the other card to the deck. Spin again, and move.



**Get Married STOP!**  
It's your wedding day! Pop a peg in your car—that's your new husband or wife! Spin for cash gifts from everyone. Red? Collect 50K. Black? Collect 100K. Spin again, and move.



**Night School STOP!** Choose your path.

**Night School**  
If you want to change your Career, pay the bank 100K to go to Night School. Take the top College Career card. If you want to keep it, place it face-up in front of you, and return your other Career card to the deck. Otherwise, keep your current Career card. Spin again, and move.

**You love your current job!**  
Keep your current Career card. Spin again, and continue on the Life path.

OR

**Family STOP!** Choose your path.

**Family Path**  
Spin again, and head this way to have kids!

**You have other plans!**  
Spin again, and continue on the Life path.

OR



**Baby STOP!**

Spin the spinner to see how many babies you've had. Pop the pegs into your car. Spin again, and move.



**Risky STOP!** Choose your path.

**Risky Road**

Spin again, and head this way to win—or lose—big money.

**Safe Route**

Spin again, and head this way to take the Safe Route. No big risks for you!



## Out of money? Get a bank loan!

If you don't have enough money to pay a debt or buy something, you must take out a bank loan.

The banker gives you cash from the bank plus one bank loan certificate for every 50K you need to borrow.

Pay the loan off at any time by returning each certificate to the bank along with 60K in cash.

Any loans you have left at the end of the game will be taken off your final cash count.

## WIN!

### Retirement

When you reach the Retirement space, choose whether to go to the Millionaire Mansion or Countryside Acres. Park your car, lock back, and wait for everyone else to retire. Collect your retirement bonus from the bank.

1st to retire: Collect 400K.

2nd to retire: Collect 300K.

3rd to retire: Collect 200K.

4th to retire: Collect 100K.

### The End of the Game

Once everyone has retired, everyone pays their debts and adds up their wealth by doing the following:

1. Sell your houses.  
Spin to find out how much they're worth, and collect cash from the bank.
2. Collect 100K for each Action card you have.
3. Collect 100K for each Pet card you have.
4. Collect 50K for each baby you have.
5. Pay the bank 60K for each loan you have.
6. Count your cash! If you have the most, you win!

ADULT ASSEMBLY REQUIRED.

AGES

8+



the Game of **LIFE**

## Game Guide

### Object

Hit the road for a roller-coaster life of adventure, family, unexpected surprises, and pets! The player with the most money at the end of the game wins!



### Contents

Gameboard with spinner • 100 cards  
5 Spin to Win™ tokens • 4 cars • 24 people pegs  
12 pet pegs • money pack

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# The Rules of Life

## SET IT UP!

The first time you play, carefully remove the pegs from their frame. If needed use an emery board or sandpaper to remove the excess plastic from the pegs. Discard the frame after removing all the pegs.

### 1 Give each player:



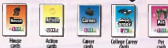
1 car and matching Spin to Win tokens

1 pink or blue peg

1 pet peg

200K

### 2 Split the cards into five decks, and put them next to the board.



### 3 Choose a banker.

The banker gives you your salary when you pass over or land on a Payday space.

If anyone runs out of money, the banker gets in a bank loan. See Out of money? Get a bank loan! for more info.

### 4 Each player, choose your path.

#### Choose College?

You'll be more likely to get a better paying job. Pay the bank 100K in tuition fees immediately.

#### Choose Career?

You'll get paid sooner. Take the top two Career cards from the deck, choose your favorite, and place it face up in front of you. That's your job! Return the other card to the bottom of the deck.

### 5 Pop your pegs in your car, and tell everyone your pet's name! Now you're ready to start!

## PLAY!

### How to Win

Move your car from start to retirement and experience all sorts of unexpected adventures.

Once everyone's retired, the wealthiest player wins!

### Who Goes First

The youngest player goes first, and play moves to the left.

### On Your Turn

- 1 Spin the spinner, and move that many spaces along the path. On your first turn, start on the career path you chose.



### Payday

If you pass a Payday space, collect the salary on your Career or College Career card from the bank.



### STOP!

When you come to a STOP! space, stop your token there even if you have moves left. Each STOP! space is different. See STOP! SPACES on the back of this guide.

### 2 Where did you land?

Check out the Board Spaces section of this guide to see what to do when you land on a space.

### 3 Your turn ends, and the next player may spin!

## THE BOARD SPACES



### Payday Spaces

If you pass a Payday space, collect the salary on your Career or College Career card from the bank. If you land on a Payday space, collect your salary AND take an additional 100K bonus!



### Action Spaces

When you land here, take the top Action card from the deck, read it aloud, and do what it says. Keep the card until the end of the game. It's worth money!



### Spin to Win\* Spaces

1. When you land here, all players choose a number on the Spin to Win\* wheel and place their token on that number. You get to put a second token (the silver one) on a second number.

2. Spin the spinner until a number with a token on it comes up. That player wins 200K!



### Baby Spaces

When you land here, you've had a baby! Add as many pegs to your car as the space tells you.



### House Spaces

When you land here, you may choose to buy a house, sell a house, or do nothing.

To buy a house:

Take the top two House cards from the deck. Choose your favorite, and pay the bank the purchase price. Return the other card to the deck.

You may own more than one house!

To sell a house:

Spin the spinner. Then look at the center of the spinner to see if your spin is red or black. Collect the sale price for that color, as listed on the House card, from the bank. Return the card to the deck.



### Pet Spaces

When you land here, draw the top Pet card from the deck. Read it aloud, and do what it says. Keep the card until the end of the game. It's worth money!



# The Rules of Life

- You will modify the existing rules to the game (posted on Blackboard)
- The rules cover marriage, educational investment, home ownership, children and occupations
- Your modifications should address all of these areas
- At least one modification should relate to ceremony (the Coll 300 theme)
- Your new rules should introduce real institutions
- For each modification, you will find an academic article investigating the economics of that institution and write a 2- to 3-sentence summary of the main point of the article or an interesting finding of the article (quick [Google Scholar](#) aside)

# An Example


- I might introduce the notion of a dowry or brideprice when a player gets married that involves the player either receiving or paying money based on gender
- I could link this to the *Journal of Economic Perspectives* article “The Economics of Dowry and Brideprice” by Siwan Anderson
- My summary would be:


*Economic models suggest that brideprices are a consequence of competition in the marriage market and the role of outside options. Greater earning opportunities outside of marriage for females or greater competition among males for female wives have historically led to higher brideprices.*

# The Cards of Life




# The Cards of Life


  
**Teacher**




© & © 2017 Hasbro

**SALARY 100K**


Bonus Number   
Whenever someone spins 6, they pay you 20K.


  
**Lawyer**




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**SALARY 120K**


Bonus Number   
Whenever someone spins 9, they pay you 20K.


  
**Vet**




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**SALARY 100K**


Bonus Number   
Whenever someone spins 7, they pay you 20K.

  
**Police Officer**



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**SALARY 50K**

Bonus Number   
Whenever someone spins 4, they pay you 20K.

# The Cards of Life



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## City Penthouse

Purchase price **600K**

Spin for Sale Price

Spin Red **650K**

Spin Black **700K**



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## Farmhouse

Purchase price **300K**

Spin for Sale Price

Spin Red **250K**

Spin Black **380K**



© 2017 Hasbro.

## Luxury Flat

Purchase price **250K**

Spin for Sale Price

Spin Red **200K**

Spin Black **300K**

# The Cards of Life



## Trace your family tree!

Discover a family fortune.

**COLLECT 70K FROM THE BANK.**

Keep this card to get 100K at the end of the game.

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## FIRED for snoozing on the job!

Return your Career card to its deck. Shuffle the deck, and take the top 2 cards. Take your favorite, and return the other to the deck.

Keep this card to get 100K at the end of the game.

© & © 2017 Hasbro.

## PROMOTION!

Your hard work paid off!  
SPIN AGAIN!



**COLLECT 10K x YOUR SPIN FROM THE BANK,**  
and take another turn.

Keep this card to get 100K at the end of the game.

© & © 2017 Hasbro.



## LAWSUIT!

Sue another player for stealing your stapler!  
**CHOOSE A PLAYER & COLLECT 20K FROM THAT PLAYER.**

Keep this card to get 100K at the end of the game.

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# The Cards of Life

- You will create 20 new action cards as a group (action card examples are posted on Blackboard)
- As with the rule modifications, each card should be tied to a real institution, an academic article about that institution, and a summary of that academic work
- At least two of your cards should relate to the Coll 300 theme of ceremony
- Only restrictions are that the actions must work with the existing game board, pieces and banknotes (unless you want to create new pieces) and they must fit on a card
- If you do want to create new pieces, consider using the 3D printers in [Swem's Makerspace](#)

# An Example

- I might introduce the card: “Discover and patent a new drug. Spin the wheel to find out if the patent gets enforced. If Red, patent is enforced, collect 100K from the bank. If Black, courts do not enforce the patent, pay 40K to the bank in legal fees”
- I could link this to the 2005 *American Economic Review* article “How do patent laws influence innovation?” by Petra Moser
- My summary would be:

*Using evidence from World’s Fairs, Moser (2005) finds that countries with patents had more diversified innovation than countries without patents. This suggests that patent laws impact the direction of technical change.*



# Putting it all Together

- You will submit your rules as an editable document with footnotes containing your academic references and summaries
- You will submit your cards as a spreadsheet with the card text, academic reference citation, academic reference url, and summary in separate columns
- Submitting in these formats will then let me construct complete game sets for the Academic Festival
- All of the game rules and cards will have QR codes to link to your summaries and citations
- At the festival, you'll play rounds with attendees and discuss the academic work underlying your modifications

# Putting it all Together



- If there are people you want to work with, have one person email me names of everyone by February 8th
- I'll randomly assign all remaining students to groups on February 11th
- April 3rd and 5th will be group work days (no lecture but the lecture room is available to you)
- Game modifications and cards are due April 17th
- In-class presentations on April 19th, 22nd and 24th
- Academic Festival is April 24th from 5pm to 7pm

# The Coase Theorem - An Example

- Suppose that a factory pollutes a river and that pollution harms farmers downstream
- The factory earns  $\pi_0$  in profits, the farmers lose an amount  $H$  from their usual profits of  $\pi_f$  due to the pollution
- The factory could eliminate the pollution by installing a filter that costs  $C$
- If nobody has rights to the river, the factory will simply pollute and combined profits will be  $\pi_0 + \pi_f - H$
- What if we assign rights to the farmers?

# The Coase Theorem - An Example

- Farmers can force the factory to not pollute, or they can accept a payment to allow pollution
- Since they will be harmed by  $H$ , that payment must be at least  $H$
- Since the factory can always install a filter for  $C$  to avoid paying  $H$ ,  $C$  is the most the factory is willing to pay
- Now we have two possibilities:

$$C > H$$

$$C < H$$

# The Coase Theorem - An Example

$$H > C$$

- In this case no deal can be struck, the factory will install the filter and earn  $\pi_0 - C$
- The farmers are spared the pollution and earn their regular profits  $\pi_f$
- Total profits are now  $\pi_0 - C + \pi_f$ , giving us the following change in total profits:

$$\Delta\pi = H - C$$

- Since  $H > C$ ,  $\Delta\pi > 0$  and we have a more efficient outcome

# The Coase Theorem - An Example

$$C > H$$

- In this case a deal can be struck, any payment between  $H$  and  $C$
- Let's say they split the difference and settle on  $\frac{C+H}{2}$
- So factories don't need to install the filter, but they do make a payment to farmers and farmers suffer from pollution but receive that payment
- New total profits are:

$$\pi_{\text{total}} = \left( \pi_0 - \frac{C+H}{2} \right) + \left( \pi_f - H + \frac{C+H}{2} \right)$$

- This is where we started,  $\pi_{\text{total}} = \pi_0 + \pi_f - H$ , but that's where we should be since  $C > H$

# The Coase Theorem - An Example

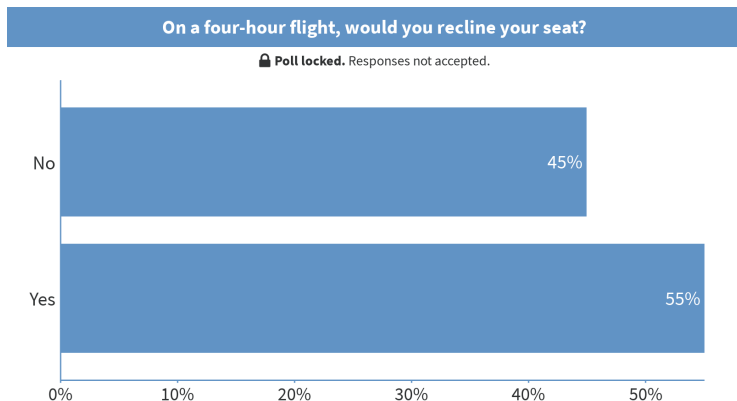
- Now let's switch the property rights, the factory gets the rights to the river
- Farmers would need to pay the factory owner to stop the pollution
- The factory owner would demand a payment of at least  $C$  to install the filter
- Farmers would be willing to pay up to  $H$
- Our two cases:
  - $H > C$ : a deal is struck, the filter is installed
  - $H < C$ : no deal is struck, the river is polluted



# The Coase Theorem - An Example

- Note that these are the same outcomes as before in terms of whether the filter is installed
- This means we reach the same efficient outcomes
- Payments go in different directions but that doesn't matter when adding up total profits (they always cancel out)
- It does matter (a lot) for how happy farmers are relative to factory owners
- This gets to questions of *equity*, the fairness of the distribution of surplus
- To explore further, let's take the discussion back to our poll results and the two editorials

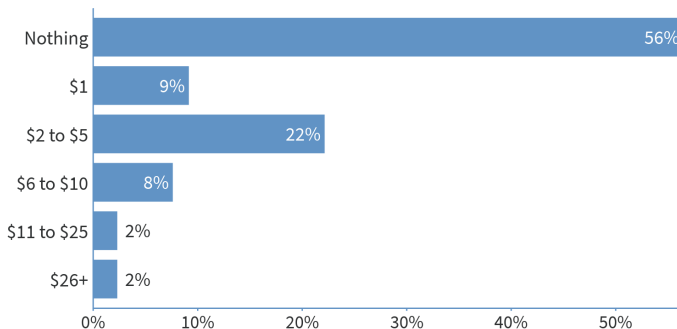
# The Coase Theorem - An Example



# The Coase Theorem - An Example

If you had to pay to recline your seat, how much would you pay on a four-hour flight?

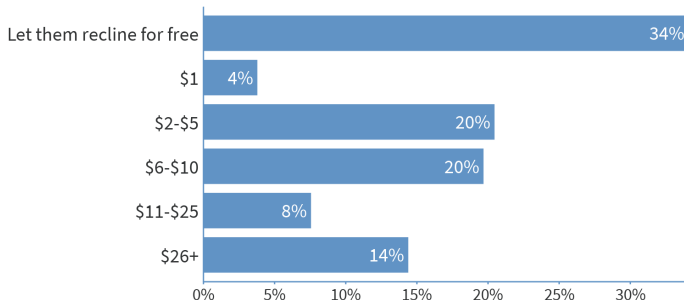
 Poll locked. Responses not accepted.



# The Coase Theorem - An Example

If the person in front of you had to pay you to recline his or her seat on a four-hour flight, what is the minimum would you accept?

 **Poll locked.** Responses not accepted.



# Property Rights, Efficiency and Equity

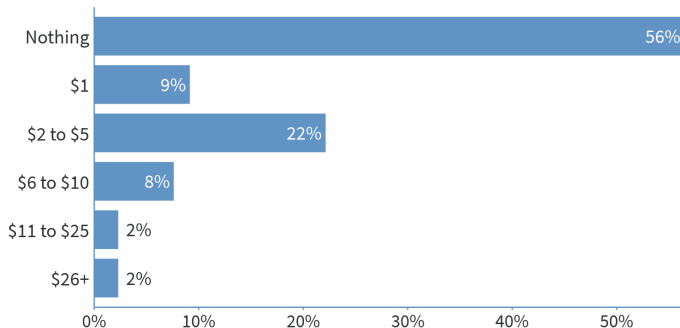
- Recall our condition when setting up the Coase theorem, *“if there are no transaction costs”*
- This is a big, big deal
- It can be incredibly costly to ask the disgruntled business traveller in front of you to strike a deal
- Part of why it is costly gets at a different sort of institutions, social norms
- These can shape behavior and outcomes just as strongly as a formal institution like property rights
- Throughout this class, we'll be thinking about the roles of both formal and informal institutions

- We'll have our first quiz on Wednesday
- It will cover the lectures up to and including today
- It will also cover North (1991) "Institutions" *Journal of Economic Perspectives*
- In general, quiz questions for readings will be focused on broad understanding, not small details
- Don't worry about memorizing, just make certain you can identify and understand the main points of the reading
- For next week's lectures (not the quiz), read North and Thomas (1970) "An Economic Theory of the Growth of the Western World"

# The Coase Theorem - An Example

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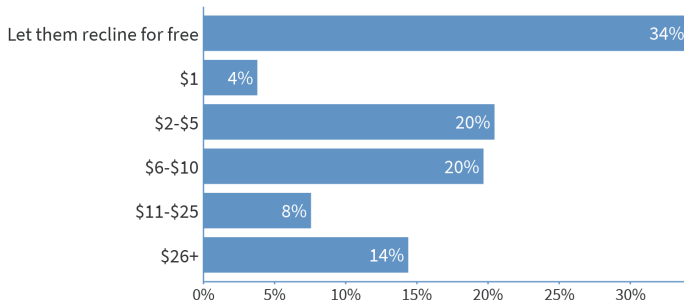
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# The Coase Theorem - An Example

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 **Poll locked.** Responses not accepted.





# Property Rights, Efficiency and Equity

- Poll results suggest a few things
- Some of you value reclining more than others value the space in front of them
- This suggests allowing reclining should increase efficiency
- Some of you value the space in front of you more than others value reclining
- In these cases, reclining is inefficient
- So what sort of institutions should we use?

# Property Rights, Efficiency and Equity

- We could ban reclining
- We could allow reclining
- We could allow reclining and clearly assign property rights to the recliner
- We could allow reclining and clearly assign property rights to the person behind
- What are the efficiency and equity considerations for each of these?

# Property Rights, Efficiency and Equity

- There is a big lingering problem
- Recall our condition when setting up the Coase theorem, *“if there are no transaction costs”*
- It can be incredibly costly to ask the disgruntled business traveller in front of you to strike a deal
- Part of why it is costly gets at a different sort of institutions, social norms
- These can shape behavior and outcomes just as strongly as a formal institution like property rights
- Throughout this class, we'll be thinking about the roles of both formal and informal institutions

# Property Rights, Efficiency and Equity

- So no transactions costs is a pretty big hurdle
- There is actually one more wrinkle to that problem
- What if creating property rights generates unnecessary costs?
- These costs may simply reduce total surplus without helping anyone
- Let's think about the smartphone patent wars

# Property Rights, Efficiency and Equity

U.S. Patent

Dec. 23, 2008

Sheet 2 of 38

US 7,469,381 B2

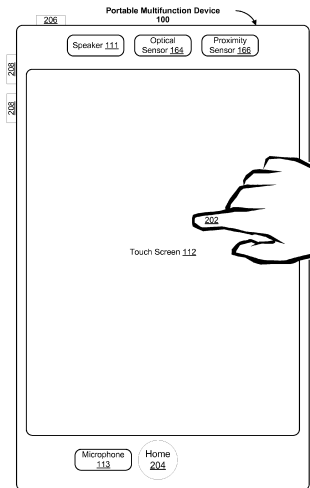


Figure 2

# Property Rights, Efficiency and Equity

U.S. Patent

Dec. 23, 2008

Sheet 10 of 38

US 7,469,381 B2

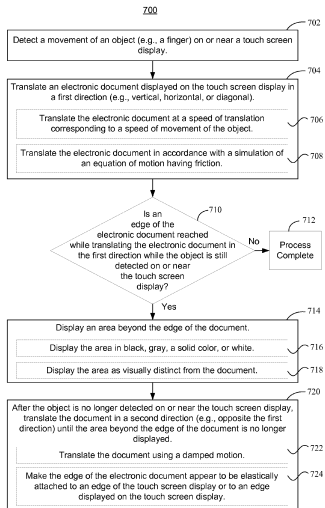


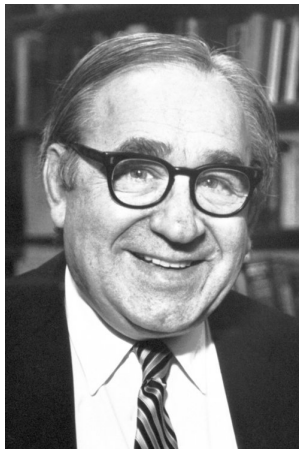
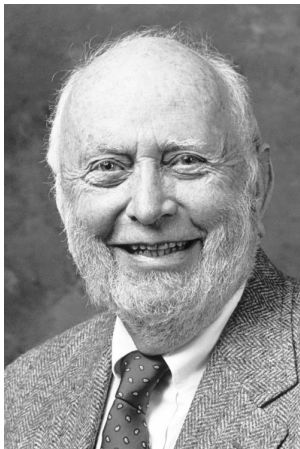
Figure 7

# Property Rights, Efficiency and Equity



Click [here](#) for a timeline of the smartphone patent wars.

# North and the Study of Institutions





# What are Institutions?

*Institutions are the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights). – Douglass North, 1991*

# Why have Institutions?

- Think back to the Coase theorem
- That revolved around a particular type of institutions, property rights
- However, we still had this lingering issue of transaction costs
- Further institutions might help lower these costs (think about how you enforce property rights)
- Very broadly, North sees institutions as ways to enable low cost transacting and producing
- Let's walk through North's schematic stages of economies and institutions

# The Evolution of Economies and Institutions

Local exchange / Hunting and Gathering



## Local exchange / Hunting and Gathering

- Specialization is rudimentary, most households are self-sufficient
- Small-scale village trade in a dense social network
- Informal constraints facilitate local exchange

## Inter-village Trade



## Inter-village Trade

- Eventually, trade expands beyond a single village
- Transaction costs increase since the dense social network is replaced
- People need new ways to approach measurement and enforcement
- Religious precepts usually imposed standards of conduct

# The Evolution of Economies and Institutions

## Long Distance Trade (Caravans, Ships)



## Long Distance Trade (Caravans, Ships)

- Sharp break in characteristics of economic structure
- Specialization in exchange by individuals
- Development of trading centers
- Start having geographic specialization and occupational specialization
- Two big transaction cost issues:
  - Problem of agency
  - Problem of contract negotiation and enforcement



## Long Distance Trade (Caravans, Ships)

- One way to solve the problem of agency was the use of kin
- For protection of goods en route you see armed forces or payment to local coercive groups
- For negotiation and enforcement, you see the rise of standardized weights and measures, units of account, a medium of exchange, notaries, consuls, merchant law courts, protection by foreign rulers in return for revenue...

## Increased Urbanization

- Rise of hierarchical producing organizations
- Emergence of towns and central cities
- Increase in proportion of labor force engaged in manufacturing
- More complex and impersonal forms of exchange emerge
- Personal ties, voluntaristic constraints and ostracism are no longer effective
- Need effective, impersonal contract enforcement

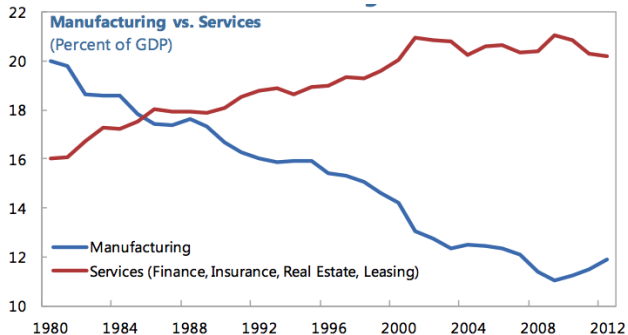
## Modern Societies

- Highly specialized
- Agricultural sector is small
- Markets are nationwide and worldwide
- Large-scale organization in manufacturing and agriculture
- Everyone undertakes a specialized function and relies on a vast network of interconnected parts
- Occupations shift from manufacturing to service sector

## Modern Societies

- Specialization requires more and more resources to be engaged in transacting
- The transaction sector becomes a large percentage of gross national product
- Growth of trade, finance, banking and insurance sectors
- Emergence of international specialization and therefore the institutions to safeguard property rights across national borders

# The Evolution of Economies and Institutions



Source: Haver Analytics and World Bank Development Indicators. 1/ Values for 2011 and 2012 are staff estimates based on IP growth rates of each country.

# Announcements

- Remember that we have a quiz on Wednesday
- It will cover the lectures up to and including Friday, January 25th
- It will also cover North (1991) “Institutions” *Journal of Economic Perspectives*
- In general, quiz questions for readings will be focused on broad understanding, not small details
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- For this week’s lectures (not the quiz), read North and Thomas (1970) “An Economic Theory of the Growth of the Western World”

# The Evolution of Economies and Institutions

- We're going to make this general schematic a bit more concrete by looking at North and Thomas (1970)
- First, let's motivate North and Thomas by thinking about a couple of examples of this problem of agency in the modern world and the preindustrial world
- Let's start with the modern world and a quick poll (<https://pollev.com/jmparman>)

## Seller Return Policy

When you order from a seller that fulfills and ships its own inventory (also called a third party seller), your return is sent back to the seller instead of Amazon.com. While most sellers offer a returns policy equivalent to Amazon.com's, some seller returns policies may vary. You can view the return policy of the seller before you purchase an item by viewing the Returns and Refunds Policy section of the seller profile page. To view the seller's return policy, once you've ordered, you can select your order in the [Online Returns Center](#).

Third-party sellers must either provide a return address within the United States, provide a prepaid return label, or offer a full refund without requesting the item be returned. If a seller does not offer these methods to return your items, you may file an A-to-z Guarantee claim to seek help with your return.

If you are sending the item within the United States and the order is valued at \$100 or more, insure the shipment for the value of the merchandise and ship your return with a signature shipping service. Items valued over \$35 must be returned to the seller with a trackable shipping service. For items below \$35, we suggest USPS delivery confirmation service. If a package doesn't arrive and you don't use a trackable method to return or if you refuse the shipment as a method of return, we may not be able to cover you under the A-to-z Guarantee.

**Note:** If the seller's listing is eligible for Amazon Prime, it will be subject to the same return policies as items fulfilled by Amazon.com that are outlined on this page.





## Customer Service

Home › Help › Selling policies

2 min overview

## Selling policies

Our policies are designed to help create a fair and safe trading experience for all eBay users. As a seller, you're responsible for regularly reviewing and complying with eBay's selling policies, and for meeting your obligations as set out in our [User Agreement](#).

CL about > scams

[personal safety](#) | [prohibited](#) | [recalls](#) | [forum](#)

## Avoiding Scams

**Deal locally, face-to-face**—follow this one rule and avoid 99% of scam attempts.

- Do not extend payment to anyone you have not met in person.
- Beware offers involving shipping - deal with locals you can meet in person.
- Never wire funds (e.g. Western Union) - anyone who asks you to is a scammer.
- Don't accept cashier/certified checks or money orders - banks cash fakes, then hold you responsible.
- Transactions are between users only, no third party provides a "guarantee".
- Never give out financial info (bank account, social security, paypal account, etc).
- Do not rent or purchase sight-unseen—that amazing "deal" may not exist.
- Refuse background/credit checks until you have met landlord/employer in person.
- "craigslist voicemails" - Any message asking you to access or check "craigslist voicemails" or "craigslist voice messages" is fraudulent - no such service exists.

# The Evolution of Economies and Institutions



# The Evolution of Economies and Institutions

- Let's think about the Commercial Revolution of the Middle Ages
- This was a period of major growth in Mediterranean and European long-distance trade
- But there isn't any sort of international law that traders and local rulers adhered to
- What kept traders and rulers from cheating one another?

# The Evolution of Economies and Institutions

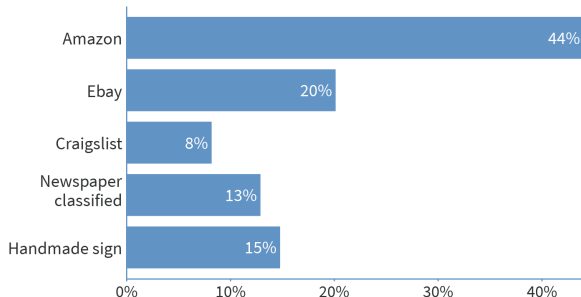
- Think of this basic problem: a local ruler is deciding whether to impose a confiscatory tax on foreign traders operating in his city
- Why would the ruler do so? Immediate revenues
- Why wouldn't the ruler do so? Future revenues (this is a repeated game)
- What's efficient? Likely letting trade grow
- How do we make that happen?
- Let's walk through the arguments in Greif, Milgrom and Weingast (1994)

- Don't forget to use the 'Submit Excused Absence' form on Blackboard for any excused absences, this is how I know to replace missing grades with averages rather than zeros
- We're having a quiz today that we'll start earlier than usual in case there are technical glitches
- The quiz will be visible on Blackboard in a few minutes but don't click on it until I tell you to (this is for your own good)
- The quiz that you can see on Blackboard ('Test Quiz') can be ignored, this is just for me to try out features throughout the semester

# Long Distance Trade and Institutions

Which of the following have you ever bought something from?

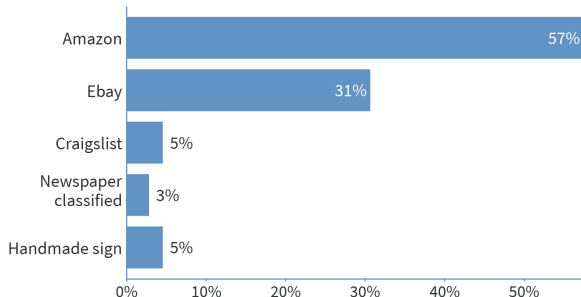
 Poll locked. Responses not accepted.



# Long Distance Trade and Institutions

Which of the following would you buy a used textbook from sight unseen?

 Poll locked. Responses not accepted.





# Long Distance Trade and Institutions

- How do we facilitate long distance trade?
- One possible solution: *bilateral reputation mechanism*
- An individual merchant whose person and property were not protected by the local ruler would refuse to return with their goods in the future
- This won't work if the value of the stream of future rents collected by the ruler is small
- This is likely to be the case if the merchant's business is small relative to the overall volume of trade or the merchant visits infrequently

- Another possible solution: *multilateral reputation mechanism*
- In this case, all merchants respond to transgressions against any subgroup of merchants
- This makes the punishment much more costly to the ruler
- Example: In 1050 the Muslim ruler of Sicily imposed a 10 percent tariff on goods imported by Jewish traders
- The traders led an embargo and sent their goods to the rival trade center, Tunisia
- After one year the ruler had to remove the tariff

# Long Distance Trade and Institutions

- So are multilateral reputation mechanisms the ticket?
- Not always, especially if a ruler can divide and conquer
- Merchants would break ranks if they got preferential treatment from the ruler
- This really undercuts the bite of the punishment
- Greif, Milgrom and Weingast note the importance of supplementing a multilateral reputation mechanism with a *coordinating organization*
- This could be an organization with the ability to both coordinate embargo decisions and enforce them by sanctioning its own members
- Enter the merchant guild...

*If any man of Ypres or Caouai shall go against those decisions [made by the guild]...for the common good, regarding fines or anything else, that man shall be excluded from selling, lodging, eating, or depositing his wool or cloth in ships with the rest of the merchants...And if anyone violates this ostracism, he shall be fined 5s. – Flemish regulations of 1240*

# The Case of the Maghribi Traders



Solomon Schechter researching the Cairo Genizah at Cambridge, 1898

# The Case of the Maghribi Traders



# The Case of the Maghribi Traders

- Greif (1989, 1992, ...) researched extensive sets of documents from the Cairo Genizah to uncover the trading practices of the Maghribi traders
- These traders recognized the cost savings of using a foreign agent but also understood the principal-agent problem, so what did they do?
- The Maghribis employed each other as agents, all retaliated against any agent who cheated a coalition member
- Their social and commercial network provided information required to detect and announce cheating
- Multilateral punishment was self-enforcing, value of future relations with all the Maghribis kept agents honest
- Led to a strong, efficient trading network

# The Case of the Maghribi Traders

- Some key things to think about for the Maghribis and others
- What are the incentives to cheat?
- What are potential punishment mechanisms?
- What formal means of contract enforcement are available?
- Is a punishment strategy credible?
- Is the agreement incentive compatible for all parties?



# Quiz Time

- It is time for our first quiz
- Before you get started, some important details
- The quiz is timed on Blackboard, once you start you get 15 minutes
- So don't click on it early and don't lose track of time while answering questions
- Go with the best possible answer: if one option is always true and another is only sometimes true, go with the one that is always true
- You'll get a score out of 80 points, when calculating grades each quiz score will be converted to a percentage
- Time to take the quiz: Go to our Blackboard page → Course Files → Quizzes → Quiz 1 (1-30-19)