

# Announcements

- Thursday office hours this week will be from 8am to 9am
- Next quiz will be Wednesday, April 10th
- We have our next COLL 300 visitor this week, Selena Fox, co-executive director of the Circle Sanctuary (and class of '71)
- The main event will be March 27th at 5pm in Sadler, Commonwealth Auditorium
- We will have an in-class visit Wednesday morning with Prof. Maliniak's class joining us
- The tentative plan for the in-class visit is about a ten-minute introduction and then student questions for the rest of the class

# Announcements



# The Academic Festival Project



# Academic Festival Project

## 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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1503.899, 1503.900, 1503.901, 1503.902, 1503.903, 1503.904, 1503.905, 1503.906, 1503.907, 1503.908, 1503.909, 1503.910, 1503.911, 1503.912, 1503.913, 1503.914, 1503.915, 1503.916, 1503.917, 1503.918, 1503.919, 1503.920, 1503.921, 1503.922, 1503.923, 1503.924, 1503.925, 1503.926, 1503.927, 1503.928, 1503.929, 1503.930, 1503.931, 1503.932, 1503.933, 1503.934, 1503.935, 1503.936, 1503.937, 1503.938, 1503.939, 1503.940, 1503.941, 1503.942, 1503.943, 1503.944, 1503.945, 1503.946, 1503.947, 1503.948, 1503.949, 1503.950, 1503.951, 1503.952, 1503.953, 1503.954, 1503.955, 1503.956, 1503.957, 1503.958, 1503.959, 1503.960, 1503.961, 1503.962, 1503.963, 1503.964, 1503.965, 1503.966, 1503.967, 1503.968, 1503.969, 1503.970, 1503.971, 1503.972, 1503.973, 1503.974, 1503.975, 1503.976, 1503.977, 1503.978, 1503.979, 1503.980, 1503.981, 1503.982, 1503.983, 1503.984, 1503.985, 1503.986, 1503.987, 1503.988, 1503.989, 1503.990, 1503.991, 1503.992, 1503.993, 1503.994, 1503.995, 1503.996, 1503.997, 1503.998, 1503.999, 1504.000.

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# Academic Festival Project

## 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:



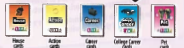
1 car and matching Spin to Win tokens

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:

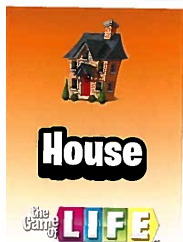
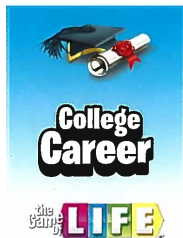
Spin the spinner. Then look at the center of the spinner to see if your spin is red or black. Collect the sale price for that color, as listed on the House card, from the bank. Return the card to the deck.




**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!

# Academic Festival Project




# Academic Festival Project


  
**Teacher**




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**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.

# Academic Festival Project



## 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.

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## 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.

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## 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.

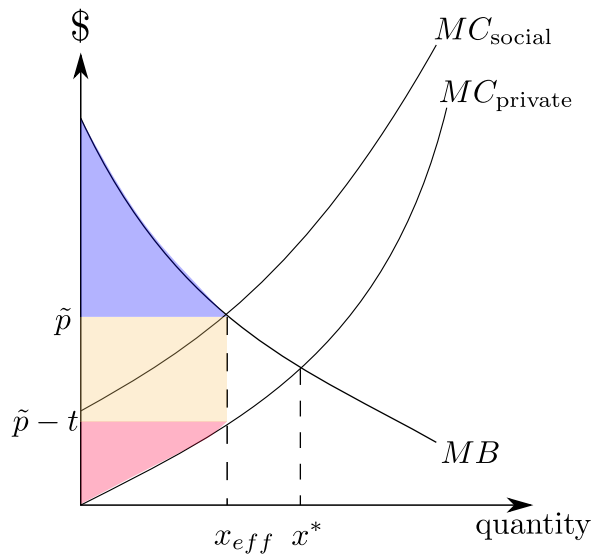
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# Academic Festival Project

- Be certain to be working on your Academic Festival projects
- Everything is due April 17th
- Don't forget that at least one rule modification and two action cards must relate to ceremony
- For the action cards, keep in mind that the text of the card will be printed on something business-card size
- Be creative, think about all of the ways formal and informal institutions impact big and small aspects of life
- Take advantage of the spinner, also consider creative ways to handle occupation and house cards

# COLL 300 and Institutional Change in the US



- So in the case of a negative externality, we get over-production in the absence of regulation
- This is inefficient because total surplus is lower than it could be
- You could also argue that it is not equitable, consumers and firms are imposing environmental costs on others
- Direct regulation can fix the problem by making firms (or consumers) take into account the externality

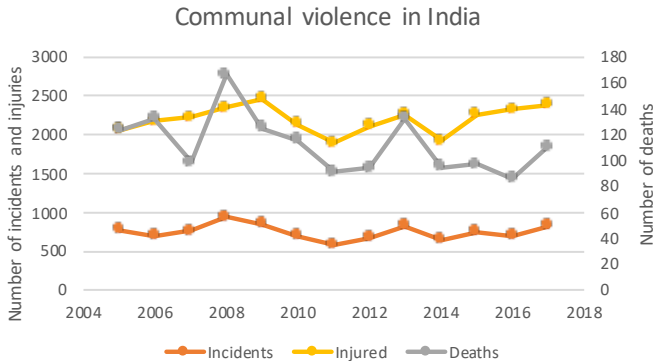
- The environmental legislation of the 60s and 70s provided this type of regulation
- There are also a range of other relevant formal institutions: property rights, civil litigation, freedom of the press, campaign finance regulations, ...
- But is there a role for informal institutions?
- This brings us back to our COLL 300 visit
- Three things I want you to think about:
  - Did social norms need to change before formal institutions could change?
  - Can social norms lead us to efficient outcomes without formal institutional change?
  - How might ceremony matter here?

# Trade, Trust and Religion

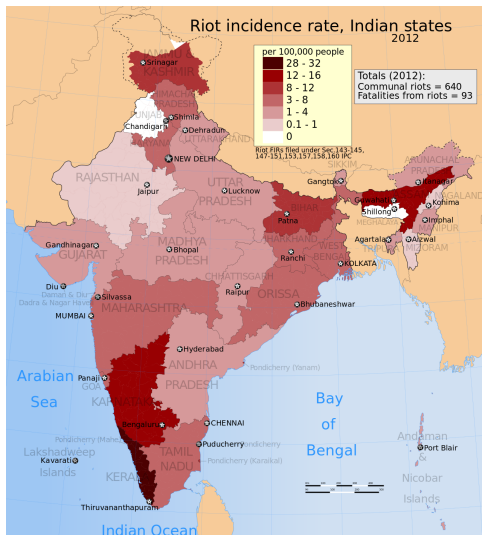
- Back to our issues of institutional persistence
- One thing we have seen is that past conflict can have persistent effects on economies through distrust and corrupt governance
- Today we'll walk through "Trade, Institutions, and Ethnic Tolerance: Evidence from South Asia" by Saumitra Jha to explore these ideas a bit more with one of the cooler empirical papers in recent years
- This will help also help us transition into the last main section of our course, the relationship between religious beliefs, religious institutions and economic behavior

- Jha is interested in the relationships between trade, institutions and ethnic tolerance
- Consider the words of Baron de Montesquieu (1748):

*“Commerce is a cure for the most destructive prejudices; for it is almost a general rule that wherever the ways of man are gentle there is commerce; and the wherever there is commerce, there the ways of men are gentle.”*
- In contradiction to this quote is the experience of ethnic Chinese in Indonesia, South Asians in East Africa, and Jews in Europe
- Jha’s main question: what conditions for trade lead to ethnic tolerance?



# Trade, Institutions and Ethnic Tolerance

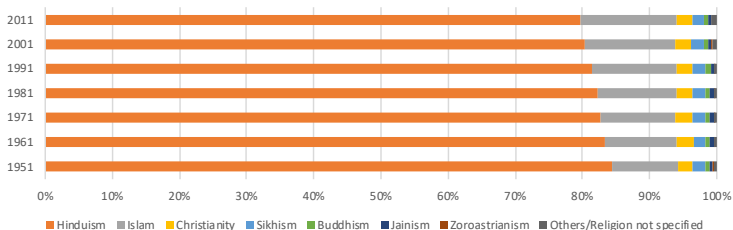


Constructed by M Tracy Hunter using Crime in India 2012 Statistics, National Crime Records Bureau (NCRB), Ministry of Home Affairs, Govt of India, Table 1.8, page 212.



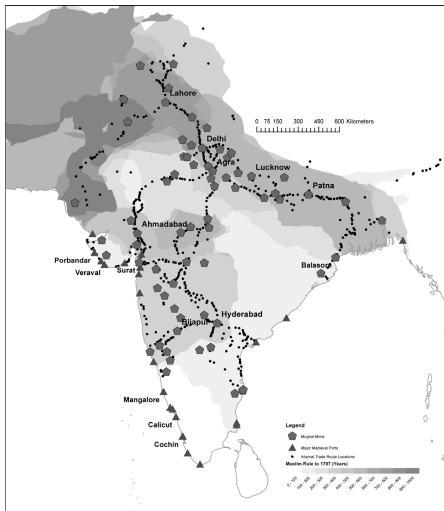
# Trade, Institutions and Ethnic Tolerance

Indian population by religion



# Trade, Institutions and Ethnic Tolerance

FIGURE 1. Major Medieval Ports and Political Patronage Centres, ca. 8th century- 1707



Note: Muslims traded to ports across both coasts in the medieval period, spanning places that enjoyed long periods of Muslim political control (shaded darker) and areas where such control was fleeting (lightly shaded). Many towns were also founded as centres of Muslim political control and patronage in the medieval period, with mints established to monetize wealth.

# Trade, Institutions and Ethnic Tolerance





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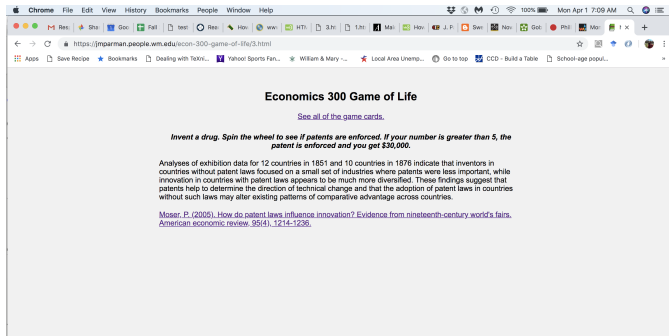


Invent a drug. Spin the wheel to see if patents are enforced. If your number is greater than 5, the patent is enforced and you get \$30,000.



Econ 300 Edition

# Announcements



The screenshot shows a Chrome browser window with the address bar displaying <https://jparman.people.wm.edu/econ-300-game-of-life/3.html>. The page content includes:

## Economics 300 Game of Life

[See all of the game cards.](#)

***Invent a drug. Spin the wheel to see if patents are enforced. If your number is greater than 5, the patent is enforced and you get \$30,000.***

Analyses of exhibition data for 12 countries in 1851 and 10 countries in 1876 indicate that inventors in countries without patent laws focused on a small set of industries where patents were less important, while innovation in countries with patent laws appears to be much more diversified. These findings suggest that patents help to determine the direction of technical change and that the adoption of patent laws in countries without such laws may alter existing patterns of comparative advantage across countries.

Moser, P. (2005). How do patent laws influence innovation? Evidence from nineteenth-century world's fairs. *American economic review*, 95(4), 1214-1236.

# Academic Festival Project

- Be certain to be working on your Academic Festival projects
- Everything is due April 17th
- Don't forget that at least one rule modification and two action cards must relate to ceremony
- For the action cards, keep in mind that the text of the card will be printed on something business-card size
- Be creative, think about all of the ways formal and informal institutions impact big and small aspects of life
- Take advantage of the spinner, also consider creative ways to handle occupation and house cards

# Announcements

- Remember that there is no class on Wednesday or Friday
- Those class periods would be a very, very good chance to get work done on the Academic Festival projects
- I hope to have response papers graded by Monday (it will depend on internet access while I'm traveling)
- Next quiz is on Wednesday, April 10th
- It covers the Iyer article ("The New Economics of Religion") and lecture material starting with the Hapsburg Empire study (the March 18th lecture)

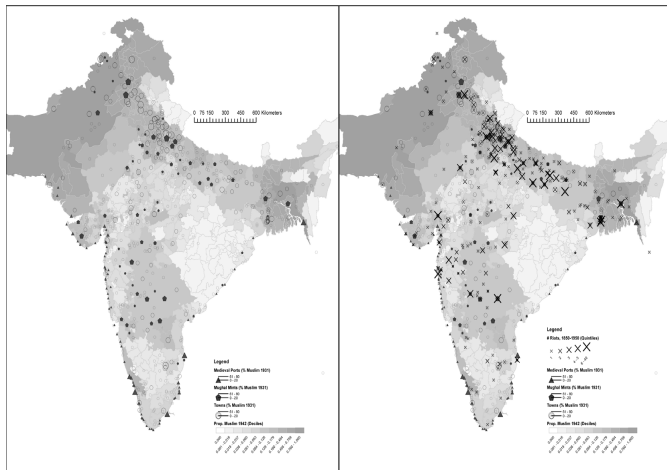
# Announcements

- Don't forget to get your response essay for Selena Fox turned in by 5pm today
- Submit them through the 'Assignments' link on Blackboard
- Same grading rubric as before, be certain to bring in specifics from either the morning class or the evening event
- Our last COLL 300 visitor will be Setsuko Thurlow, April 10th at 5pm
- We will not have a class visit for the last speaker, just the main event



# Trade, Institutions and Ethnic Tolerance

FIGURE 2. Medieval Legacies: Religious Composition and Hindu-Muslim Riots



(a) Religious Composition, 1931

(b) Hindu-Muslim Riots, 1850-1950

*Note:* The pattern of modern religious demography mimics patterns of Muslim rule, medieval trade, and political patronage. Medieval ports and major Muslim patronage centers (such as those that housed mints) continued to have greater Muslim populations relative to nearby areas in 1931. Medieval ports, however, experience fewer religious riots relative to towns nearby.

# Trade, Institutions and Ethnic Tolerance

- Jha is going to focus on how medieval trade influences ethnic violence between Hindus and Muslims
- He motivates things with a basic theoretical model:
- Think of two types of agents, *local* and *nonlocal* (Hindus and Muslims)
- Nonlocals differ from locals in that they have better outside options
- Nonlocals have access to information and networks in other regions (think the Middle East, rest of the Islamic world)
- Resources of the locals (Hindus) are concentrated locally

- Individuals have the following choices each period:
  - Stay or leave town
  - Produce a good for exchange
  - Attack any other agent
- The potential benefits of each action depend on a variety of factors

- Violence is destructive but may be useful for seizing property and deterring or punishing actions
- Strong individuals will likely prevail in an attack against weak individuals
- Peace and production would be efficient, but potentially not the equilibrium outcome
- This gets back to many of the things we've talked about throughout the semester (North, Greif, etc.)

- Jha wants to think about when there is a peaceful co-existence in equilibrium
- This means a mixed population of locals and nonlocals, full production, no out-migration and no violence
- Such an environment will arise under very specific conditions in Jha's model

When do we get peaceful, productive co-existence?

- Nonlocals and locals should produce complementary goods or services
- If they produced substitute goods, strong locals would force weak nonlocals out of town (ethnic violence)
- The nonlocals' contributions should be hard to cheaply replicate
- The nonlocals' resources should be hard to violently seize
- There need to be mechanisms that redistribute surplus between groups to reduce incentive to violently expropriate

How do Muslim traders satisfy these conditions? Partly through our COLL 300 theme of ceremony

# Trade, Institutions and Ethnic Tolerance



# Trade, Institutions and Ethnic Tolerance





# Trade, Institutions and Ethnic Tolerance

- There were Islam-specific advantages to trade across the Indian Ocean
  - Pilgrimages to Mecca coordinated the development of the world's largest textile market during the Hajj
- Muslim advantages in oceanic trade were hard to steal or replicate
  - Trade networks enjoy increasing returns to scale
  - Oceanic trade can't be split into short segments and replicated by a local
- There was a natural, decentralized mechanism for the redistribution of surplus to locals
  - It was easy for any Muslim to enter into the Indian Ocean trade (unlike kin-based trade networks)
  - Intra-Muslim competition would drive prices down for locals

- Jha draws on a wide range of data to test his theory
- He'll use historical texts on trade patterns, geographic data, datasets on ethnic violence, surveys on modern attitudes, etc.
- The basic thing that Jha wants to test is whether areas that gave rise to the right kinds of trade end up having lower levels of ethnic violence
- In other words, were the places where medieval trade functioned well the places with lower levels of violence today?

- A key thing to look at then would be areas that are medieval ports
- You could regress modern rates of riots and violence on an indicator for being a medieval port
- There are two big problems with this approach related to many of the econometric problems we've talked about before
- Why were particular ports chosen?
- What if there are other unobserved variables correlated with international trade?

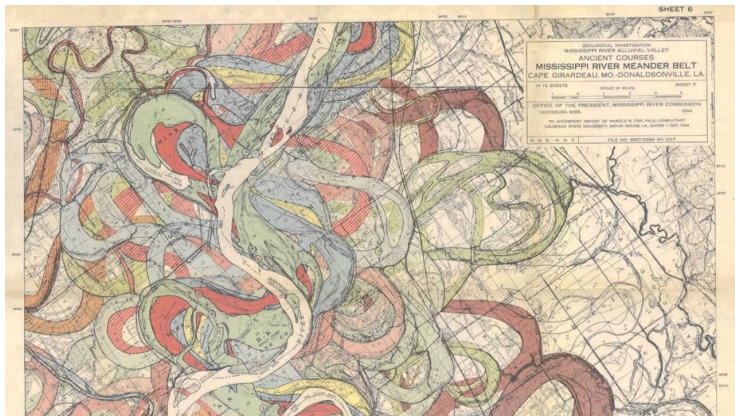
- The first issue in Jha's words:  
*A second potential concern...is that Muslim traders may have chosen to trade at geographically similar ports for unobservable reasons, such as having a local population with a proclivity for peace independently of trade.*
- Solution: don't look at which towns did become ports, look at which towns had the right geography to be a port

- Jha identifies medieval natural harbors through the following steps:
  - Use a 2001 atlas to identify water bodies within 10km of the modern Indian coastline
  - If those bodies intersected the coast in a the medieval period, they would have produced inlets or sheltered harbors
  - Towns within 10km of those water bodies are defined as potential harbors
- These potential harbors provide an instrument for the actual harbors, it should pick up variation in trade driven solely by geography, not unobserved characteristics of the local population

# Trade, Institutions and Ethnic Tolerance

- The second issue, whether it is ongoing international trade that drives peace, is trickier
- We need some sort of exogenous force shutting off trade to certain ports randomly
- This is where Jha gets really clever
- Jha notes that coast itself has moved over time due to the effects of monsoon season
- Certain ports that were active harbors in medieval times have become inaccessible to shipping due to silting
- This gives Jha natural variation in the viability of trade within a town over time

# Trade, Institutions and Ethnic Tolerance



- So after all of this work, what does Jha find?
- Medieval ports were five times less prone to Hindu-Muslim riots between 1850 and 1960 (two centuries after Europeans disrupted Muslim overseas trade dominance)
- Medieval ports remained half as prone to Hindu-Muslim riots between 1950 and 1995





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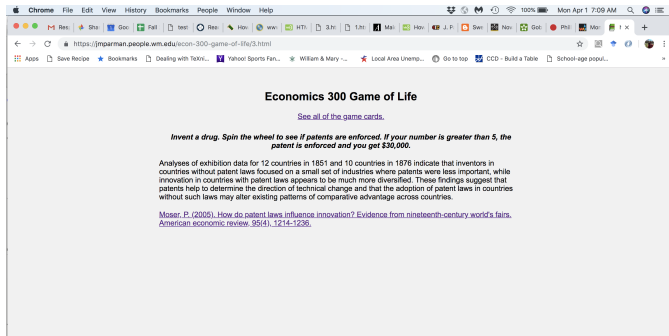


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Econ 300 Edition

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# Academic Festival Project

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- Take advantage of the spinner, also consider creative ways to handle occupation and house cards (optional)

# Announcements

- Next quiz is on Wednesday, April 10th
- It covers the Iyer article (“The New Economics of Religion”) and lecture material starting with the Hapsburg Empire study (the March 18th lecture) up to and including today’s lecture
- For the Iyer article, you are not expected to know what each of the cited studies is about, you are expected to understand the main points of each section of the paper (think of it as being able to provide a two-sentence summary of each section)
- The lecture getting ready for Selena Fox is fair game



Setsuko Thurlow at negotiations for the Treaty on the Prohibition of Nuclear Weapons

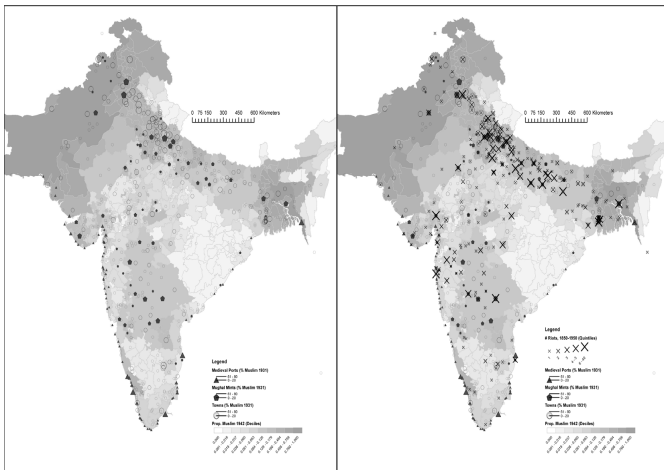


Aerial view of Hiroshima after the atomic bomb was dropped

- Grades are posted for your Selena Fox response papers
- Our final visitor is Setsuko Thurlow on April 10th at 5pm
- Our last COLL 300 visitor will be Setsuko Thurlow, April 10th at 5pm
- I posted a speech by Thurlow and an article on US-Japan reconciliation on Blackboard
- One thing I want you to think about is how World War II and the relationship between the US and Japan compares to many of the other stories of conflict and development we've seen

# Trade, Institutions and Ethnic Tolerance

FIGURE 2. Medieval Legacies: Religious Composition and Hindu-Muslim Riots



*Note:* The pattern of modern religious demography mimics patterns of Muslim rule, medieval trade, and political patronage. Medieval ports and major Muslim patronage centers (such as those that housed mints) continued to have greater Muslim populations relative to nearby areas in 1931. Medieval ports, however, experience fewer religious riots relative to towns nearby.



# Trade, Institutions and Ethnic Tolerance

- Jha's basic theory was that the right economic conditions could create peaceful, productive cities with multiple groups coexisting
- Furthermore, that peaceful coexistence could persist even after the initial conditions disappear
- The Muslim oceanic trading network of the Middle Ages (fueled in part by the ceremony of pilgrimage) created these conditions
- Medieval ports were five times less prone to Hindu-Muslim riots between 1850 and 1960 (two centuries after Europeans disrupted Muslim overseas trade dominance)
- Medieval ports remained half as prone to Hindu-Muslim riots between 1950 and 1995

- Evidence from surveys suggest greater trust today for Muslims in medieval port towns than non-port towns
- This evidence is actually based on attitudes toward the polio vaccine
- Medieval port residents today are more likely to be members of business groups and trade unions and join credit and savings groups
- Lots of parallels to the institutions papers we've studied (think about the Hapsburg Empire work)
- Let's take a second to think about these trust measure in a US context with Alsan and Wanamaker (2017)

# Trust and Institutionalized Discrimination



A Pakistani policeman guards a team of polio vaccinators during an immunization drive in Karachi on January 22. Officials have stepped up protection in the wake of the January 18 attack. Rizwan Tabassum/AFP/Getty Images (2018)

# Trust and Institutionalized Discrimination

**"All the News That's Fit to Print"**

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### HOUSE COMMITTEES Dean of Columbia Is Shot; E. C. PROPOSES BACKS A MOVEMENT Suspended Student Sought

NEW YORK (AP) — A Columbia University dean was shot and wounded in a drive-by shooting on Monday, and a student suspended from the school is seeking reinstatement.

Dean William Paul Voth, 48, is in U.S. in a Washington hospital as of Monday.

NEW YORK (AP) — A student suspended from Columbia University is seeking reinstatement.

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### U.S. JURY FINDS Most Power Back in City; Voltage Cut in Some Areas

NEW YORK (AP) — A jury has found that most of the power in New York City is back on, but voltage is still being cut in some areas.

### Nixon Accord With Soviet Embitters NATO Official

WASHINGTON (AP) — A NATO official says the Nixon-Soviet accord is embittering NATO members.

### 11 MILLION FREED FROM WAGE CURBS

WASHINGTON (AP) — Eleven million workers are freed from wage curbs.

### School Board Will Create Office of Safety Director

NEW YORK (AP) — A school board will create an office of safety director.

### Britain Faces Paralysis in Labor Dispute

LONDON (AP) — Britain faces paralysis in a labor dispute.

### Syphilis Victim in U.S. Study Went Untreated for 40 Years

NEW YORK (AP) — A syphilis victim in a U.S. study went untreated for 40 years.

### Sheriff Frees Green Berets' P.O.W.s

WASHINGTON (AP) — A sheriff has freed Green Berets' P.O.W.s.



## ***Syphilis Victims in U.S. Study Went Untreated for 40 Years***

By **JEAN HELLER**

The Associated Press

WASHINGTON, July 25—For 40 years the United States Public Health Service has conducted a study in which human beings with syphilis, who were induced to serve as guinea pigs, have gone without medical treatment for the disease and a few have died of its late effects, even though an effective therapy was eventually discovered.

The study was conducted to determine from autopsies what the disease does to the human body.

Officials of the health service who initiated the experiment have long since retired. Current officials, who say they

have serious doubts about the morality of the study, also say that it is too late to treat the syphilis in any surviving participants.

Doctors in the service say they are now rendering whatever other medical services they can give to the survivors while the study of the disease's effects continues.

Dr. Merlin K. DuVal, Assistant Secretary of Health, Education and Welfare for Health and Scientific Affairs, expressed shock on learning of the study. He said that he was making an immediate investigation.

The experiment, called the Tuskegee Study, began in 1932 with about 600 black men,

Continued on Page 8, Column 1

**The New York Times**

Published: July 26, 1972

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# Trust and Institutionalized Discrimination

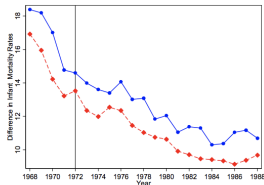


Tuskegee syphilis experiment subject blood draw, 1953

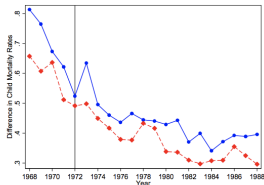
# Trust and Institutionalized Discrimination

Figure I: Black-White Mortality Differences by Age and Sex

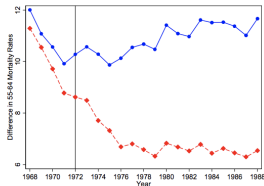
Panel A. Infant Mortality Rate



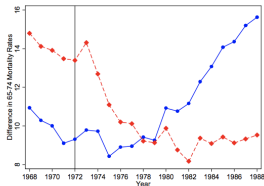
Panel B. Child Mortality Rate



Panel C. 55-64 Mortality Rate



Panel D. 65-74 Mortality Rate



*Notes:* The data are from the CDC compressed mortality files and represent the black-white difference in age-specific mortality rates. Each mortality rate is calculated by dividing the number of deaths in the relevant population by the at-risk population (in thousands). The solid (blue) line represents the difference for males, and the dotted (red) line represents the difference for females. The vertical line represents the year “The Tuskegee Study of Untreated Syphilis in the Negro Male” was disclosed. For additional figures, including plots of all other age-specific mortality rates and South only, see the Appendix.

# Trust and Institutionalized Discrimination

**Table I: Baseline Estimates Utilization and Mortality**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable:							
	<i>Number Outpatient Visits</i>	<i>Any Outpatient Visit</i>	<i>Any Hospital Admission</i>	<i>Number Nights in Hospital</i>	<i>Log Age - Adjusted All- Cause Mortality</i>	<i>Level Age- Adjusted All- Cause Mortality</i>	<i>Log Age- Adjusted Chronic Mortality</i>	<i>Level Age- Adjusted Chronic Mortality</i>
<i>Mean of Dep Var for Black Men before 1973</i>	4.10	0.62	0.14	2.26	3.42	30.68	3.14	23.37
	PANEL A--Utilization				PANEL B--Mortality			
$P_j * post_t * black_r * male_g$	-1.328*** (0.354)	-0.037*** (0.007)	-0.015 (0.013)	0.738** (0.363)	0.071*** (0.023)	2.142** (0.851)	0.087*** (0.022)	1.566** (0.770)
$P_j * post_t * male_g$	-0.022 (0.080)	0.004 (0.005)	0.004 (0.004)	0.067 (0.075)	0.005* (0.003)	-0.045 (0.047)	0.008*** (0.003)	-0.031 (0.040)
$P_j * post_t * black_r$	-0.052 (0.110)	0.011* (0.006)	0.006 (0.004)	0.123 (0.104)	-0.017 (0.019)	-0.765 (0.658)	-0.018 (0.020)	-0.682 (0.663)
Fixed Effects	State-Year, Race-Gender-Year, Race-Gender-State				SEA-Year, Race-Gender-Year, Race-Gender-SEA			
Observations	220,954	220,954	220,954	220,954	17,737	18,600	17,611	18,600
No. Clusters	49	49	49	49	465	465	465	465
Adj R-squared	0.017	0.025	0.010	0.010	0.812	0.303	0.804	0.226



- Alsan and Wanamaker's work demonstrates that the same processes we've been discussing in other cultures and other eras are at work within the US as well
- They also point us to another important issue for this class, individual behaviors that are shaped by institutions
- As we transition into our final section on religious institutions, we're going to start thinking more about how individual behaviors and decision-making depend on institutions
- We'll start looking at individual outcomes in addition to the more aggregate outcomes we've focused on to date

# Religion, Religious Institutions and Economic

- As a bit of motivation, let's start out with another class experiment
- Unlike our Golden Balls experiment, we're not going to look at strategy or trust of others
- Instead, we're going to look at something even more fundamental, individual preferences
- In particular, we'll think about heterogeneity in risk preferences across different groups
- It turns out that this is one area where religious institutions have a very particular link to economic behavior

# Measuring Risk Aversion

- We're going to go through a few poll questions to measure differences in risk aversion across groups
- These questions are pretty standard in the risk literature, you're choosing between a sure thing  $A$  versus a lottery with payouts  $B$  and  $C$  where  $B < A$  and  $C > B$
- More risk-averse people will tend to take the sure thing, more risk-loving people will tend to take the lottery
- Let's give it a go...

# Measuring Risk Aversion

- We can't really trust your answers without real money on the line, so let's put real money on the line
- I'm looking for six volunteers, each will come up and make a decision between a sure thing and a lottery
- We'll roll a die to see which of the six participants actually gets the real thing
- If that participant chose the lottery, we'll then have a live dice roll to see what happens
- If you want to participate, click on an element on the periodic table (remember your element)
- If you don't want to participate, click on the white space around the periodic table

# Measuring Risk Aversion

- The sure payoff will be \$10
- The lottery will be the following:
  - If you roll doubles, you get \$50
  - If you don't you get \$ $n$  where  $n$  is your contestant number
  - Expected payoff ranges from \$9.17 ( $n = 1$ ) to \$13.33 ( $n = 6$ )
- Everybody makes their decision and then we roll a die to see who actually plays (die number equals  $n$ )

# Announcements



- Our last COLL 300 visitor will be Setsuko Thurlow, April 10th at 5pm in the Sadler Center Commonwealth Auditorium
- The response paper essay prompt will be posted tonight under 'Assignments'
- The response paper will be due Monday at 5pm but I strongly encourage getting it written while the event is fresh in your mind

# Academic Festival Project

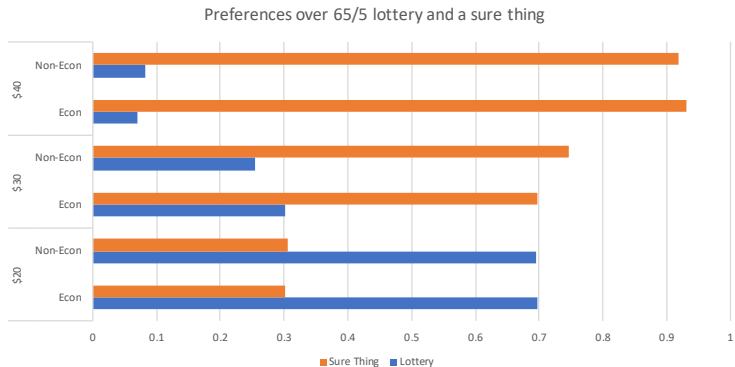
- Academic Festival projects are due April 17th
- Don't forget that at least one rule modification and two action cards must relate to ceremony
- For the action cards, keep in mind that the text of the card will be printed on something business-card size
- Rules can be submitted as a complete set of rules or as a set of modifications that explain where to insert each modification in the existing rules



# Academic Festival Project

- Group presentations will be during the Monday and Wednesday lectures in the last week of classes
- Each group will have five minutes to talk about their favorite rule changes and action cards
- Not everyone in the group needs to present
- You should use slides, send them to me at least a day before your presentation

# Risk Aversion and Religion



# Risk Aversion and Religion

- These choices between a sure payout and a bigger, riskier payout are the same as those used in “Risk Aversion and Religion” by Noussair, Trautmann, van de Kuilen and Vellekoop (2013)
- They set out to see how and why risk aversion may differ across different religious groups
- They asked survey respondents to choose between a variety of different lotteries and sure payoffs
- They then looked at how the revealed risk attitudes varied by religious affiliation and religiosity
- How are they measuring religiosity?

- One way is with a question about the degree of belief in God
- Responses were on a scale of 1 (*"I do not believe in God"*) to 6 (*"I believe without any doubt in God"*)
- Another way was a series of seven questions about specific beliefs, things like *"Do you believe in life after death?"*
- The religiosity variable in this case counted the number of affirmative responses
- So what do they find?

# Risk Aversion and Religion

**Table 2** Parental and own church membership

Parents in church	Subject in church	All respondents		Real stakes		Hypothetical stakes	
		# obs.	Avg. risk aversion <sup>a</sup>	# obs.	Avg. risk aversion <sup>a</sup>	# obs.	Avg risk aversion <sup>a</sup>
Yes	Yes	917	3.54	371	3.47	546	3.58
Yes	No	611	3.36	250	3.04	361	3.58
No	Yes	61	3.56	23	3.57	38	3.55
No	No	715	3.35	262	3.18	453	3.45

Parents in church refers to parents' membership status when respondent was aged 15

<sup>a</sup> On scale from 0 (least risk averse) to 5 (most risk averse)

# Risk Aversion and Religion

**Table 3** Attendance at church services

Attendance	All respondents		Real stakes		Hypothetical stakes	
	# obs.	Avg. risk aversion <sup>a</sup>	# obs.	Avg. risk aversion <sup>a</sup>	# obs.	Avg. risk aversion <sup>a</sup>
Current						
More than once a week	86	3.83	38	3.76	48	3.88
Once a week	159	3.65	60	3.62	99	3.67
Once a month	160	3.39	71	3.42	89	3.37
Less often	1892	3.40	733	3.20	1159	3.52
During Childhood: at age 15						
More than once a week	247	3.43	110	3.31	137	3.53
Once a week	744	3.44	287	3.19	457	3.60
Once a month	159	3.43	61	3.20	98	3.57
Less often	1147	3.43	443	3.32	704	3.49

<sup>a</sup> On scale from 0 (least risk averse) to 5 (most risk averse)

# Risk Aversion and Religion

**Table 4** Risk aversion, church membership and attendance

	All	All	Real	Real	Hypo	Hypo	All	All	Real	Real	Hypo	Hypo
Controls A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls B	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Church membership												
Own	.335 (2.47)**	.290 (2.12)**	.595 (3.0)***	.514 (2.52)**	.131 (.72)	.100 (.55)						
Parents'							.271 (1.88)*	.248 (1.72)*	.207 (.93)	.180 (.81)	.306 (1.61)	.283 (1.50)
N	2304	2304	906	906	1398	1398	2304	2304	906	906	1398	1398
Attendance <sup>a</sup>												
>1 per week	.664 (2.07)**	.569 (1.77)*	.874 (1.80)*	.713 (1.42)	.483 (1.16)	.436 (1.06)						
=1 per week	.539 (1.98)**	.491 (1.80)*	.640 (1.53)	.546 (1.31)	.486 (1.34)	.478 (1.31)						
=1 per month	.087 (.33)	.056 (.22)	.459 (1.29)	.398 (1.11)	-.204 (.55)	-.216 (.58)						
>1 per week (age 15)							.160 (.70)	.100 (.44)	.016 (.05)	-.078 (.23)	.253 (.84)	.200 (.67)
=1 per week (age 15)							.167 (1.07)	.150 (.95)	-.185 (.80)	-.210 (.90)	.403 (1.91)*	.371 (1.76)*
=1 per month (age 15)							.032 (.12)	.061 (.22)	-.184 (.43)	-.131 (.31)	.135 (.38)	.140 (.39)
N	2297	2297	902	902	1395	1395	2297	2297	901	901	1396	1396

Dependent variable: risk aversion; Tobit regressions, coefficients reported, *t*-values based on robust s.e. in parentheses

<sup>a</sup>Excluded category = less active than once a month

\*/\*\*/\*\* indicate significance at 10%, 5%, and 1% level

# Risk Aversion and Religion

**Table 7** Risk aversion and beliefs/prayer

	All	All	Real	Real	Hypo	Hypo
Controls A	Yes	Yes	Yes	Yes	Yes	Yes
Controls B	No	Yes	No	Yes	No	Yes
Religious belief indicator						
Stronger belief	.070 (1.62)	.046 (1.04)	.098 (1.45)	.069 (.98)	.038 (.69)	.024 (.42)
N	757	757	285	285	472	472
Degree of belief in God						
Stronger belief	.046 (1.26)	.041 (1.10)	.060 (1.11)	.047 (.83)	.033 (.67)	.029 (.59)
N	2302	2302	905	905	1397	1397
Praying (outside services)						
>1 per week	.532 (3.38)***	.512 (3.23)***	.482 (2.10)**	.435 (1.89)*	.539 (2.52)**	.518 (2.37)**
=1 per week	-.560 (1.50)	-.599 (1.61)	.094 (.17)	.041 (.07)	-1.032 (2.10)**	-1.120 (2.26)**
=1 per month	-.029 (.11)	-.053 (.19)	-.529 (1.34)	-.588 (1.48)	.351 (.93)	.319 (.85)
N	2294	2294	901	901	1393	1393

Dependent variable: risk aversion; Tobit regressions, coefficients reported, *t*-values based on robust s.e. in parentheses

\*/\*\*/\*\*\* indicate significance at 10%, 5%, and 1% level



# Risk Aversion, Religion and Development

- So Noussair et al. find a positive correlation between risk aversion and religiosity
- They have some suggestive evidence that this is not about beliefs themselves but rather about the social aspects of church membership
- In that sense, it is very much about the institutions surrounding religion
- Why does this matter for economic development?

# Risk Aversion, Religion and Development

- Risk aversion is related to savings behavior, healthcare decisions and health policies, valuation of life, insurance decisions, etc.
- All of these relate to decisions that will impact economic development
- This creates the potential for religion to impact economic development through individual decision-making and support for different types of economic and social policies
- For the remaining lectures, we will be thinking about the impacts of religion and religious institutions at the micro and macro levels

# Quiz Time



# Quiz Time

- Time for our fifth quiz
- Before you open it, a couple of instructions/suggestions
- The quiz is located in Course Files → Quizzes → Quiz 5 (4-10-19)
- It has eight questions, for each choose the *single* best answer
- You have 15 minutes to complete the quiz
- You may use scratch paper but no other resources
- Answers and explanations will be posted tomorrow
- Remember that I expect the typical student to get roughly 6 out of 8 correct

Good luck!

# Announcements

- Get your response papers for the Setsuko Thurlow talk finished by Monday at 5pm (submit on Blackboard)
- Academic Festival projects due by Wednesday at 5pm (submit by email)
- Feel free to email me any questions or stop by office hours on Monday
- The Academic Festival itself will be in Sadler on 4/24 from 5pm to 7pm
- Plan to have two to three group members at your table at any given time, the others can wander through the rest of the festival

# Announcements

- Here's the game plan for the last two weeks
- Next week, we'll be talking religion and economics all week (no required readings beyond the Iyer article)
- Group presentations will be on Monday and Wednesday of the last week (4/22 and 4/24)
- Quiz #6 will be at the end of class on Wednesday of the last week (4/24)
- It will cover all of the religion and economics lectures, starting with the 4/8 lecture
- Last day of classes will be a review for the final

# Religion and Economic Attitudes

- Let's start by taking a look at a broader range of economic attitudes than just risk aversion
- We'll briefly look at "People's opium? Religion and economic attitudes" by Guiso, Sapienza and Zingales
- They are going to use the World Values Surveys to look at religious beliefs and economic attitudes controlling for country-fixed effects
- First, what's in the survey?

# Religion and Economic Attitudes

- The World Values Surveys cover 66 countries from 1981 to 1997
- They ask about religious affiliation, intensity of beliefs (frequency of attending religious services) and whether the person was raised religiously
- For economic attitudes, the authors focus on people's attitudes toward: cooperation, women, government, legal rules, fairness of the market economy, and thriftiness
- As an example, they measure attitudes toward legal norms with questions on willingness to cheat on taxes, avoid a fare on public transportation and pay bribes



# Religion and Economic Attitudes

*Panel A: Attitudes towards religion by country (percentages)*

Country	Raised religiously at home	Goes to church at least once a year	Goes to church at least once a week	Does not believe in God	Number of respondents
France	32.38	37.1	10.4	33.02	2202
Britain	23.84	30.38	9.95	12.92	3808
West Germany	43.3	56.34	16.98	19.35	4423
Italy	56	76.86	35.44	10.07	3366
Netherlands	32.57	53.22	22.79	29.54	2238
Denmark	19.8	42.68	2.67	31.65	2212
Belgium	60.12	51.21	27.53	22.28	3937
Spain	75.33	57.9	29.64	11.59	13370
Ireland	42.44	93.73	81.46	2.75	2217
N. Ireland	41.4	81.33	50.65	3.25	616
USA	48.28	74.57	43.27	3.21	5706
Japan	14.26	71.06	3.06	25.45	3269
Mexico	50.57	82.06	48.22	4.47	4878
S. Africa	68.52	48.78	31.94	1.6	7267
Hungary	27.97	43.32	12.38	33.17	2463
Australia	64.06	46.34	16.5	18.65	2048
Norway	28.27	47.98	5.07	28.74	3612
Sweden	21.13	37.77	4.55	39.44	3010
Iceland	32.29	53.22	2.33	16.94	1629
Argentina	54.8	59.88	22.59	7.58	3086

# Religion and Economic Attitudes

*Panel B: Distribution of population by religious denomination and country (percentages)*

Country	Catholic	Protestant	Jewish	Muslim	Hindu	Buddhist	Other affiliations	No religious affiliations
France	63.18	1.68	0.32	0.45	0.05	0.68	16.09	17.55
Britain	10.52	57.6	0.37	0.33	0.3	0.07	2.62	28.19
West Germany	41.16	44.66	0.07	0.16	0.02	0.02	0.75	13.16
Italy	86.89	0.12	0.03	0	0	0.06	0.77	12.13
Netherlands	31.01	22.12	0	0.23	0.23	0.09	3.04	43.29
Denmark	1.08	94.26	0.05	0.19	0.71	0.05	0.47	3.20
Belgium	70.57	1.07	0.26	0.39	0	0.03	1.1	26.58
Spain	84.7	0.53	0.03	0.06	0.01	0.04	0.6	14.03
Ireland	94.77	2.86	0	0.05	0	0	0.5	1.82
N. Ireland	27.08	65.12	0	0	0	0	2.82	4.98
USA	28.57	46.87	1.77	0.29	0.2	0.38	9.41	12.52
Japan	0.73	1.12	0.04	0	0.11	43.83	6.31	47.86

# Religion and Economic Attitudes

*Panel C: Religiosity by religious denomination (percentages)*

Country	Raised religiously at home	Goes to church at least once a year	Goes to church at least once a week
Catholic	70.3	75.3	38.8
Protestant	47.4	59.5	25.0
Jew	44.6	57.0	16.4
Muslim	67.9	67.8	34.5
Hindu	83.8	84.7	44.4
Buddhist	22.2	75.8	8.3
Others	51.0	68.2	17.0

# Religion and Economic Attitudes

Panel E: Attitudes toward thriftiness and market's fairness

	Thrift to be encouraged	Individual vs. government responsibility	Hard work improves life	Wealth can grow for everyone	Poor are lazy
Health	-0.0110*** (0.0018)	0.1270*** (0.0125)	0.1336*** (0.0126)	0.0981*** (0.0124)	0.0071*** (0.0011)
Male	0.0036 (0.0030)	0.2517*** (0.0205)	0.2625*** (0.0208)	-0.0889*** (0.0204)	0.0177*** (0.0018)
Age	0.0024*** (0.0001)	0.0003 (0.0007)	0.0152*** (0.0007)	0.0087*** (0.0007)	-0.0000 (0.0001)
Education	-0.0063*** (0.0004)	0.0092*** (0.0025)	-0.0061** (0.0026)	0.0168*** (0.0026)	-0.0023*** (0.0002)
Social class	-0.0133*** (0.0015)	0.1612*** (0.0114)	0.0894*** (0.0115)	-0.0035 (0.0113)	0.0142*** (0.0009)
Income	-0.0070*** (0.0007)	0.0731*** (0.0049)	0.0233*** (0.0049)	0.0324*** (0.0048)	0.0036*** (0.0004)
Atheist	-0.0193*** (0.0044)	-0.0530* (0.0312)	-0.0926*** (0.0311)	-0.1397*** (0.0305)	0.0013 (0.0027)
Raised religiously	0.0157*** (0.0040)	-0.0266 (0.0261)	0.1357*** (0.0262)	-0.0039 (0.0257)	0.0044* (0.0024)
Currently religious	0.0064* (0.0036)	0.0897*** (0.0253)	0.1189*** (0.0255)	0.1205*** (0.0250)	0.0075*** (0.0022)
Actively religious	-0.0156*** (0.0041)	0.0876*** (0.0291)	0.1772*** (0.0297)	0.1927*** (0.0292)	0.0072*** (0.0025)
Number of obs	94920	77217	74349	72229	92343
Adj. R <sup>2</sup>	0.108	0.155	0.080	0.042	0.231
Raised religiously	0.0221***	0.0631*	0.2546***	0.1166***	0.0119***
+Currently religious	(0.0000)	(0.0595)	(0.0000)	(0.0004)	(0.0001)
Raised religiously	0.0065	0.1507***	0.4318***	0.3093***	0.0191***
+currently religious	(0.2320)	(0.0001)	(0.0000)	(0.0000)	(0.0000)
+actively religious					

# Religion and Economic Attitudes

Panel D: Attitudes toward the market

	Inequality of income vs. incentives	Private vs. public ownership	Competition is good or harmful
Health	0.0965*** (0.0126)	0.1247*** (0.0121)	0.1182*** (0.0110)
Male	0.1923*** (0.0207)	0.4641*** (0.0199)	0.3098*** (0.0181)
Age	-0.0015** (0.0007)	-0.0054*** (0.0007)	0.0025*** (0.0006)
Education	0.0390*** (0.0026)	0.0114*** (0.0025)	0.0115*** (0.0023)
Social class	0.2168*** (0.0115)	0.2003*** (0.0111)	0.1318*** (0.0101)
Income	0.1174*** (0.0049)	0.0755*** (0.0047)	0.0467*** (0.0043)
Atheist	-0.2102*** (0.0310)	-0.2258*** (0.0298)	-0.0924*** (0.0271)
Raised religiously	-0.0843*** (0.0262)	-0.0653*** (0.0251)	-0.0081 (0.0229)
Currently religious	-0.0215 (0.0254)	0.1326*** (0.0245)	0.0622*** (0.0223)
Actively religious	0.0512* (0.0297)	0.1179*** (0.0287)	-0.0054 (0.0260)
Number of obs	74126	71881	73311
Adj. R <sup>2</sup>	0.100	0.130	0.064
<i>Raised religiously</i>	-0.1058*** (0.0016)	0.0673*** (0.0370)	0.0541*** (0.0661)
<i>+ Currently religious</i>			
<i>Raised religiously</i>	-0.0546 (0.1476)	0.1852*** (0.0000)	0.0487 (0.1410)
<i>+ currently religious</i>			
<i>+ actively religious</i>			

# Religion and Economic Attitudes

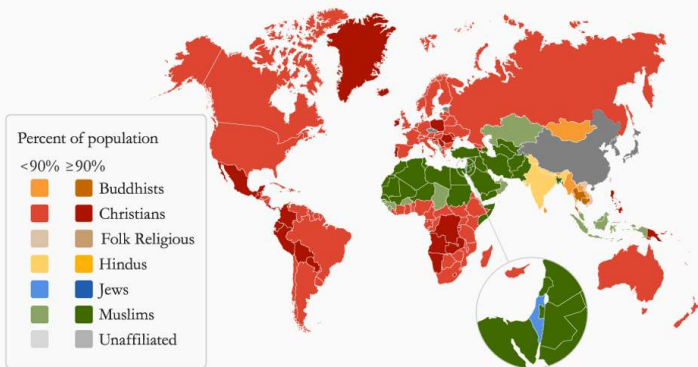
Panel C: Attitudes towards legal rules

	Trust the legal system	Is it justified to claim government benefits you are not entitled to?	Is it justified to avoid a fare on public transport?	Is it justified to cheat on taxes?	Is it justified to buy a stolen object?	Is it justified to accept a bribe?
Health	0.0428*** (0.0033)	-0.0634*** (0.0087)	-0.0596*** (0.0092)	-0.0479*** (0.0096)	-0.0294*** (0.0066)	-0.0324*** (0.0065)
Male	-0.0059 (0.0056)	0.1006*** (0.0147)	0.1132*** (0.0155)	0.3027*** (0.0161)	0.1896*** (0.0112)	0.1518*** (0.0110)
Age	0.0033*** (0.0002)	-0.0167*** (0.0005)	-0.0229*** (0.0005)	-0.0196*** (0.0005)	-0.0170*** (0.0004)	-0.0130*** (0.0004)
Education	-0.0035*** (0.0007)	-0.0074*** (0.0019)	0.0074*** (0.0020)	0.0005 (0.0020)	-0.0062*** (0.0014)	-0.0048*** (0.0014)
Social class	0.0005 (0.0028)	-0.0674*** (0.0074)	-0.0948*** (0.0078)	-0.0508*** (0.0081)	-0.0049 (0.0056)	-0.0079 (0.0055)
Income	-0.0034*** (0.0013)	-0.0105*** (0.0034)	-0.0096*** (0.0036)	0.0352*** (0.0037)	-0.0038 (0.0026)	-0.0073*** (0.0025)
Atheist	-0.0291*** (0.0084)	0.1424*** (0.0220)	0.1997*** (0.0232)	0.2454*** (0.0241)	0.2042*** (0.0167)	0.0321* (0.0165)
Raised religiously	0.0470*** (0.0075)	-0.0473*** (0.0199)	-0.1585*** (0.0210)	-0.1343*** (0.0218)	-0.0971*** (0.0151)	-0.0636*** (0.0149)
Currently religious	0.0899*** (0.0068)	0.0257 (0.0179)	-0.0149 (0.0188)	-0.0483** (0.0196)	-0.0335** (0.0136)	-0.0094 (0.0134)
Actively religious	0.0740*** (0.0077)	-0.0920*** (0.0204)	-0.1699*** (0.0215)	-0.2801*** (0.0224)	-0.1568*** (0.0155)	-0.0897*** (0.0153)
Number of obs	94259	91793	93034	92392	93161	92878
Adj. R <sup>2</sup>	0.092	0.090	0.120	0.094	0.070	0.067
<i>Raised religiously+Currently religious</i>	0.1369*** (0.0000)	-0.0216 (0.3876)	-0.1734*** (0.0000)	-0.1826*** (0.0000)	-0.1306*** (0.0000)	-0.073*** (0.0001)
<i>Raised religiously+currently religious+actively religious</i>	0.2109*** (0.0000)	-0.1136*** (0.0000)	-0.3433*** (0.0000)	-0.4627*** (0.0000)	-0.2874*** (0.0000)	-0.1627*** (0.0000)

- So religiosity seems to be correlated with a whole host of economic attitudes
- This suggests that religious institutions could strongly affect economic development
- But is this really evidence of a causal relationship?
- Let's think about where we might have some econometric issues here

## The largest religious groups worldwide

Largest religions by country in 2010 (darker colour represents greater prevalence)



@StatistaCharts

Source: Pew Research Center



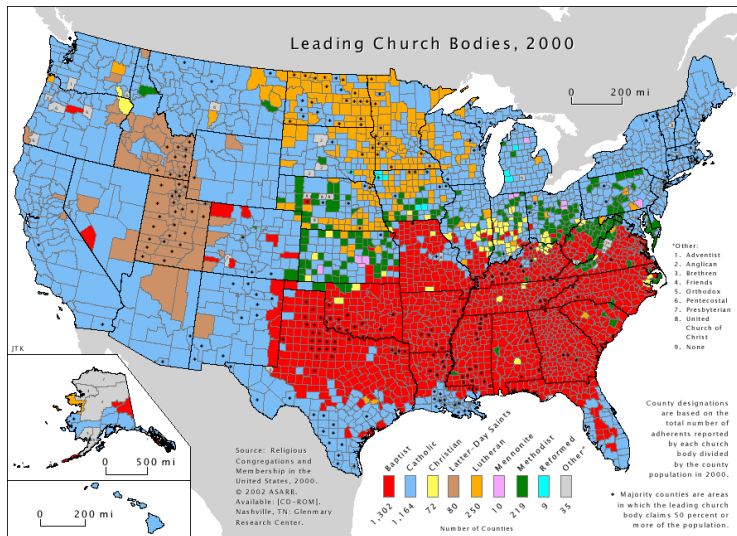
INDEPENDENT

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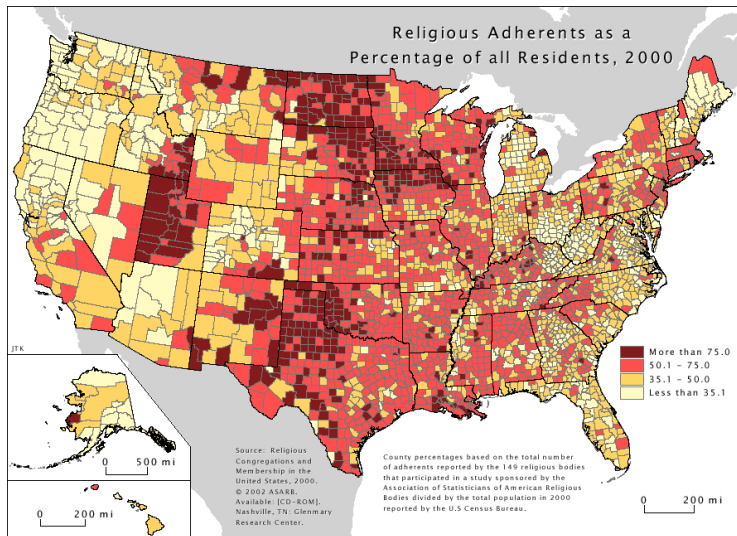




# Religion and Economic Attitudes



# Religion and Economic Attitudes



# Religion and Economic Attitudes

- Guiso, Sapienza and Zingales are taking care of systematic differences across countries, but is this enough?
- It doesn't take care of unobserved differences within countries correlated with religious denomination or religiosity as well as economic attitudes
- Their regressions may be picking up the effects of these unobserved characteristics, not religion itself
- Up next we'll think about whether we can find a natural experiment giving us exogenous variation in religion



Max Weber, 1894

*Both as ruling and ruled strata and both as a majority and minority, Protestants ... have demonstrated a specific tendency toward economic rationalism. – Weber, The Protestant Ethic and the Spirit of Capitalism, Chapter I*

*This striving becomes understood completely as an end in itself - to such an extent that it appears as fully outside the normal course of affairs and simply irrational, at least when viewed from the perspective of the "happiness" or "utility" of the single individual. Here, people are oriented to acquisition as the purpose of life; acquisition is no longer viewed as a means to the end of satisfying the substantive needs of life. Those people in possession of spontaneous, fun-loving dispositions experience this situation as an absolutely meaningless reversal of a "natural" condition (as we would say today). – Weber, The Protestant Ethic and the Spirit of Capitalism, Chapter II*

- Weber's conception of the Protestant work ethic may have received more attention from economists than any other aspect of religion
- We've had over a century of scholars trying to provide empirical evidence to support or refute Weber's thesis
- However, it is very, very hard to avoid issues of endogeneity
- A paper by Basten and Betz, "Beyond Work Ethic: Religion, Individual, and Political Preferences," provides a clever approach

- Basten and Betz are going to look at a specific part of Switzerland where there was an abrupt switch from Catholicism to Reformed Protestantism
- However, the neighboring area did not switch
- Basten and Betz are going to claim that this switch to Protestantism was rather exogenous, giving us a reasonable natural experiment to test Weber's hypothesis



# Religion and Economic Attitudes



# Religion and Economic Attitudes



The Siege of Neuss during the Burdundian Wars, Konrad Pfettisheim

# Religion and Economic Attitudes

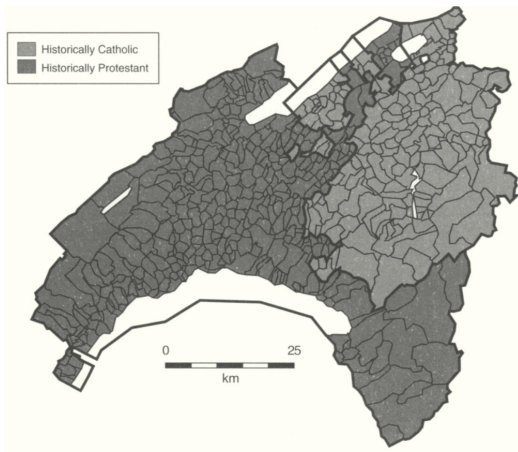


FIGURE 1. CATHOLIC AREA IN THE NORTHEAST, PROTESTANT IN SOUTH AND WEST;  
LAKE GENEVA IS IN THE SOUTH AND LAKE NEUCHATEL IN THE NORTH

# Religion and Economic Attitudes



# Religion and Economic Attitudes



Swiss Federal Statistics Office, Popular Votes

# Announcements

- Get your response papers for the Setsuko Thurlow talk finished by today at 5pm (submit on Blackboard)
- Academic Festival projects due by Wednesday at 5pm (submit by email)
- Feel free to email me any questions or stop by office hours today
- The Academic Festival itself will be in Sadler on 4/24 from 5pm to 7pm
- Plan to have two to three group members at your table at any given time, the others can wander through the rest of the festival

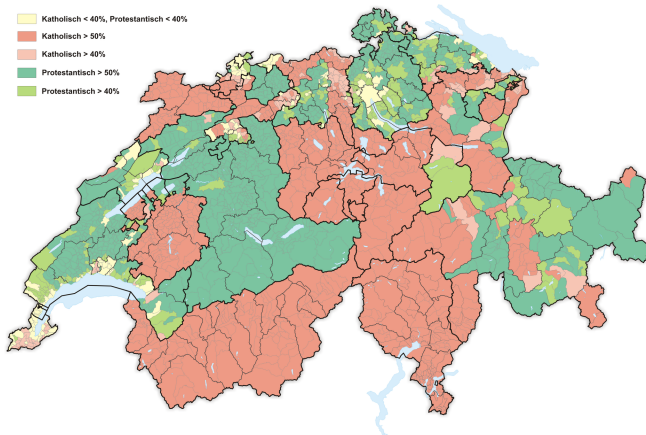
# Announcements

- Group presentations will be next Monday and Wednesday (4/22 and 4/24)
- Each presentation will be 4 minutes (with one minute built in for transitions)
- Sign your group up for one and only one slot here:  
<https://doodle.com/poll/r5vr7hxmzam3ueun>
- Send slides to me ahead of time by email (Powerpoint, Google Slides, or pdf), no video/audio/crazy transitions just to ensure compatibility

- Quiz #6 will be at the end of class on Wednesday of the last week (4/24)
- It will cover all of the religion and economics lectures, starting with the 4/8 lecture
- There are no required readings for the quiz
- Last day of classes will be a review for the final



# Religion and Economic Attitudes



# Religion and Economic Attitudes



The Siege of Neuss during the Burgundian Wars, Konrad Pfettisheim

# Religion and Economic Attitudes

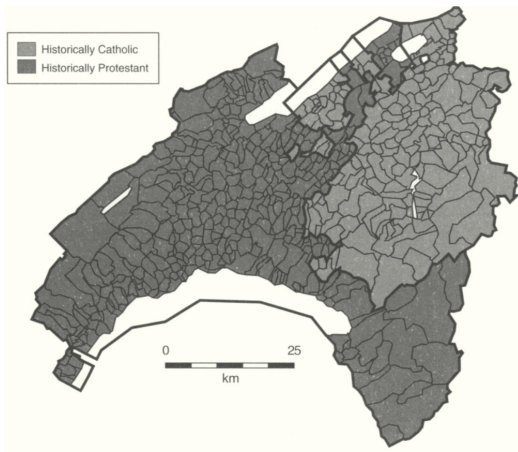


FIGURE 1. CATHOLIC AREA IN THE NORTHEAST, PROTESTANT IN SOUTH AND WEST;  
LAKE GENEVA IS IN THE SOUTH AND LAKE NEUCHÂTEL IN THE NORTH

# Religion and Economic Attitudes

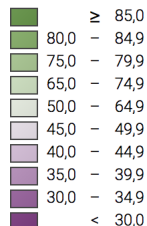
Bundesbeschluss über eine neue Finanzordnung, Abstimmung vom 28.11.2004

Neue Finanzordnung (2004) ▾

Bezirke ▾



Ja-Stimmenanteil, in %



Schweiz: 73,8

Swiss Federal Statistics Office, Popular Votes

# Religion and Economic Attitudes

- So here we have two adjacent regions that are quite similar but end up having different religions because of somewhat-random historical reasons
- Basten and Betz can then see whether attitudes differ between these two regions as a test of Weber's hypothesis
- More specifically, they are going to look at municipalities within 5km of a border point (a spot where a road intersects the border between the cantons)
- They want to see if votes on various referenda differ across these municipalities

Examples of leisure referenda:

- Prolong the length of legally required vacation (e.g., FSO 329)
- Lower the official retirement age (e.g., FSO 352)
- Cut weekly working time (e.g., FSO 354)

Examples of redistribution referenda:

- Expanding old age and disability insurance (e.g., FSO 423)
- Cutting unemployment benefits (e.g., FSO 438)
- Introducing a capital gains tax (e.g., FSO 484)

Examples of market intervention referenda:

- Price regulation in general (e.g., FSO 307)
- Price regulation in the market for renting (e.g., FSO 342)
- Price regulation in agricultural markets (e.g., FSO 418)



# Religion and Economic Attitudes

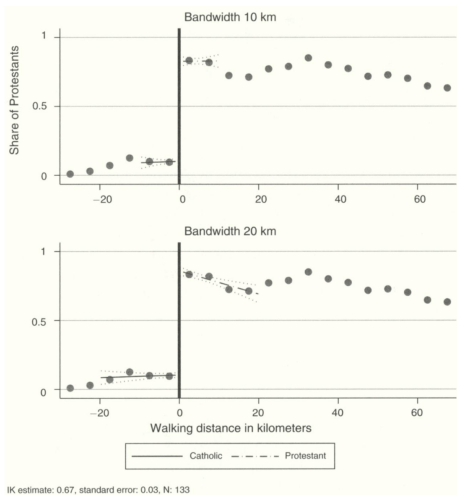


FIGURE 3. SHARE OF PROTESTANTS CONDITIONAL ON WALKING DISTANCE TO THE BORDER, BANDWIDTH 5 KM; PREDICTION FROM LINEAR REGRESSION, INCLUDING 95 PERCENT PREDICTION INTERVAL

# Religion and Economic Attitudes

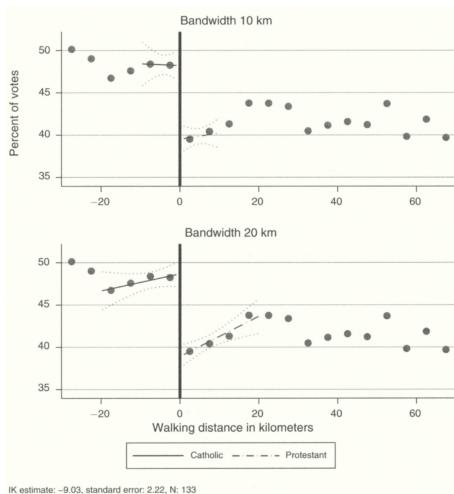


FIGURE 4. PREFERENCES FOR LEISURE CONDITIONAL ON WALKING DISTANCE TO THE BORDER, BANDWIDTH 5 KM; PREDICTION FROM LINEAR REGRESSION, INCLUDING 95 PERCENT PREDICTION INTERVAL

# Religion and Economic Attitudes

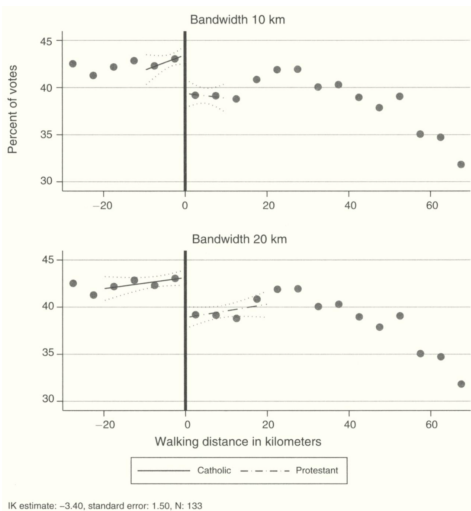


FIGURE 5. PREFERENCES FOR REDISTRIBUTION CONDITIONAL ON WALKING DISTANCE TO THE BORDER, BANDWIDTH 5 KM; PREDICTION FROM LINEAR REGRESSION, INCLUDING 95 PERCENT PREDICTION INTERVAL

# Religion and Economic Attitudes

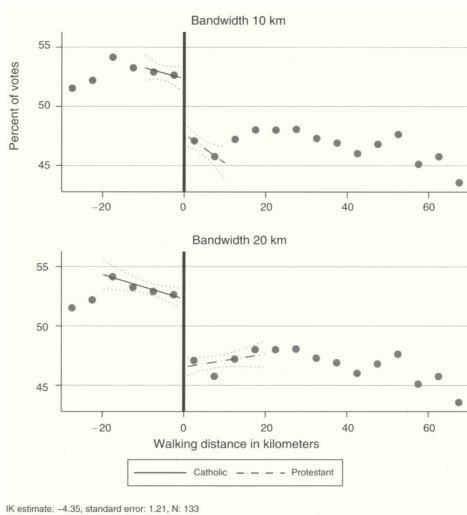


FIGURE 6. PREFERENCES FOR INTERVENTION CONDITIONAL ON WALKING DISTANCE TO THE BORDER, BANDWIDTH 5 KM; PREDICTION FROM LINEAR REGRESSION, INCLUDING 95 PERCENT PREDICTION INTERVAL

# Religion and Economic Attitudes

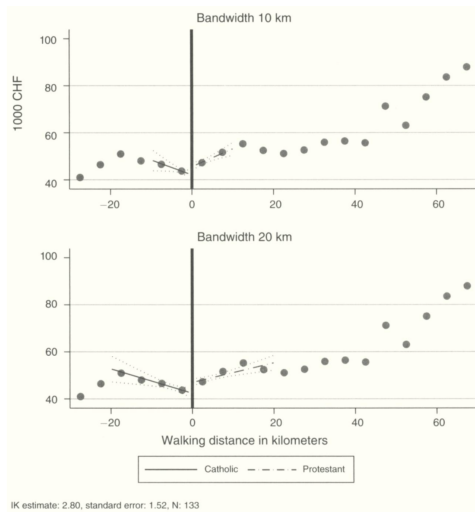


FIGURE 7. AVERAGE NET INCOME PER HEAD CONDITIONAL ON WALKING DISTANCE TO THE BORDER, BANDWIDTH 5 KM; PREDICTION FROM LINEAR REGRESSION, INCLUDING 95 PERCENT PREDICTION INTERVAL.

# Religion and Economic Attitudes

TABLE 4—SECOND STAGE RESULTS

	Preferences for leisure	Preferences for redistribution	Preferences for intervention	Mean income 1980–2000	Income inequality in 1996
	(1)	(2)	(3)	(4)	(5)
Share Protestants	-13.46*** (3.11)	-5.06** (2.13)	-6.49*** (1.71)	4.17* (2.29)	0.13*** (0.03)
Distance	0.44 (0.63)	0.44 (0.35)	-0.16 (0.33)	-0.49 (0.32)	-0.00 (0.00)
$T \times$ distance	-0.36 (0.80)	-0.91 (0.55)	0.01 (0.43)	1.14* (0.60)	-0.01 (0.01)
Constant	50.53*** (1.89)	44.56*** (0.94)	52.87*** (1.05)	42.16*** (1.20)	0.29*** (0.01)
IK OB	5.01	5.01	5.01	5.01	5.01
Observations	133	133	133	133	133

*Notes:* “Share Protestants” is the share of Protestants amongst those either Protestant or Catholic, as of the 1980 census. The coefficients give the estimated difference between a fully Protestant and a fully Catholic municipality. The share of Protestants is instrumented with  $T$ , an indicator for whether a municipality is on the historically Protestant side of the border; “Distance” is walking distance to the closest border point in kilometers; Bandwidth in kilometers is chosen optimally following Imbens and Kalyanaraman (2012). Preferences in columns 1, 2, and 3 are averages of the individual referenda listed in Table 1 of the online Appendix. Column 4 uses the average across the years 1980–2000 of each municipality’s pre-tax income divided by the number of taxpayers. Column 5 uses the Gini coefficient of income inequality, taken from EcoPlan (2004). Robust standard errors in parentheses.

- \*\*\* Significant at the 1 percent level.
- \*\* Significant at the 5 percent level.
- \* Significant at the 10 percent level.

- So Basten and Betz are finding systematic differences in the revealed economic attitudes of Protestants and Catholics
- Reformed Protestantism reduces referenda voting for leisure by 14 percentage points, redistribution by 5 percentage points and government intervention by 7 percentage points relative to Catholicism
- Basten and Best also show that this translates into greater mean income over 1980 to 2000 and greater income inequality in 1996

# Religion and Economic Attitudes

- Basten and Betz's identification relies to a certain extent on having state (or canton) religions
- Their somewhat exogenous variation comes from dividing up territory in peace agreements, one ruler deciding to go Protestant and the other not, and then the resulting affiliations being held canton-wide
- Does this seem like a good, exogenous source of variation in religion?
- Are there complications by having the existence of a state religion rather than individuals choice regarding religious affiliation?



- Let's take a slightly different approach to looking at where people opted in to the Reformation
- Instead of thinking about the role of the state, we are going to look at the role of technology
- In particular, let's look at Rubin's "Printing and Protestants: An Empirical Test of the Role of Printing in the Reformation"
- Rubin is going to link the geography of the Reformation to the geography of the printing press

# A Brief History of Printing



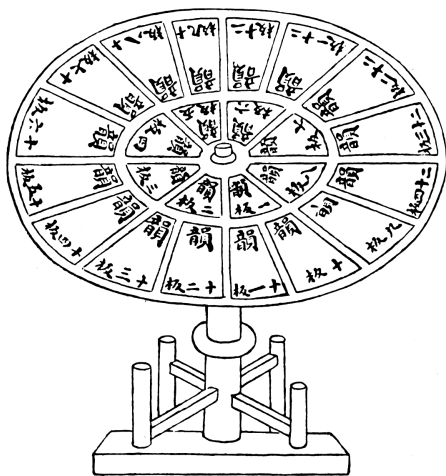
Frontispiece of the *Diamond Sutra* from Tang-dynasty China, 868 AD

# A Brief History of Printing



Example of a woodblock for textile printing

# A Brief History of Printing



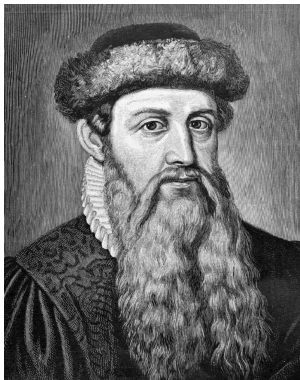
Revolving typecase for wooden type, Wang Zhen, 1313

# A Brief History of Printing



Moveable metal type during the Joseon dynasty in Korea

# A Brief History of Printing



Johannes Gutenberg, 1400-1468, Mainz

# A Brief History of Printing



The Gutenberg Bible, 1455, Mainz

# Printing and Reformation

- So by the 1450s, Europe has moveable metal type printing technology
- Why will this matter for Protestantism?
- Printing broadsides and pamphlets became a key way of communicating Reformation ideas
- This directly increased the supply and circulation of Reformation ideas
- There are demand-side arguments as well suggesting that print culture transformed cities and gave the bourgeoisie and middle classes greater social importance



# Announcements

- Thank you for the response papers, I am hoping to have them graded over the weekend
- Academic Festival projects due by today at 5pm (submit by email)
- The Academic Festival itself will be in Sadler on 4/24 from 5pm to 7pm
- Plan to have two to three group members at your table at any given time, the others can wander through the rest of the festival

# Announcements

- Group presentations will be next Monday and Wednesday (4/22 and 4/24)
- Each presentation will be 4 minutes (with one minute built in for transitions)
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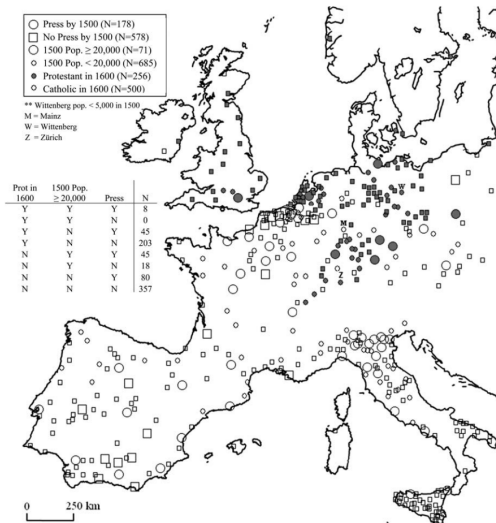
- Quiz #6 will be at the end of class on Wednesday of the last week (4/24)
- It will cover all of the religion and economics lectures, starting with the 4/8 lecture
- There are no required readings for the quiz
- Last day of classes will be a review for the final

# Printing and Reformation



# Printing and Reformation

FIGURE 1.—PROTESTANTISM AND PRINTING IN EUROPE, CITIES WITH POPULATION  $\geq 5,000$  IN 1500



# Printing and Reformation



# Printing and Reformation

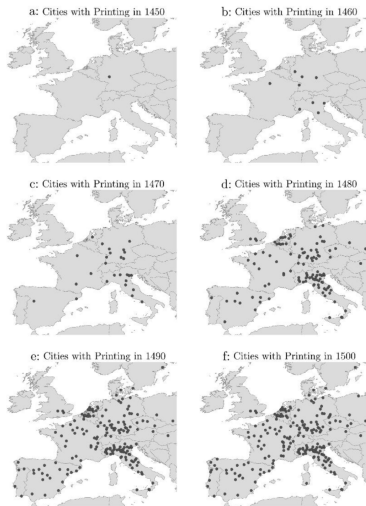


FIGURE III  
The Diffusion of the Movable Type Printing Press

# Printing and Reformation

TABLE 5.—EXOGENEITY OF DISTANCE-TO-MAINZ INSTRUMENT

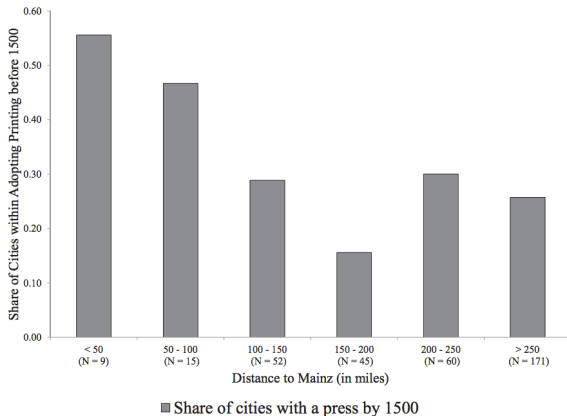
	Printing Press	Free Imperial City	Bishop	Water	Hanseatic	Log Distance to Wittenberge	Log Sixteenth-Century Growth	Log Fifteenth-Century Growth
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log Distance to Mainz	-0.184*** (0.050)	-0.048 (0.043)	0.062 (0.046)	-0.025 (0.050)	-0.017 (0.034)	0.086 (0.122)	0.063 (0.106)	0.098 (0.121)
Observations	352	352	352	352	352	352	189	134
Number of clusters	157	157	157	157	157	157	105	89
R <sup>2</sup>	0.37	0.66	0.34	0.14	0.46	0.81	0.14	0.15

OLS regression; robust standard errors clustered by territory in parentheses—city-specific, geographic control variables, and constant included as in previous regression. Cities included if they are included in any of the final three specifications of table 6. All controls are employed in each regression except for the dependent variable in question except for the bishop regression, which does not include lay magnate and the fifteenth-century growth regression, which does not include market potential. Cities are, included in regressions reported in column 7 only if population data are available for 1500 and 1600. Cities are included in regressions reported in column 8 only if population data are available for 1400 and 1500. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



# Printing and Reformation

FIGURE 2.—SHARE OF CITIES WITH PRINTING PRESS BY 1500



# Printing and Reformation

TABLE 6.—AVERAGE MARGINAL EFFECTS, PROTESTANTISM IN EUROPE

	Basic Correlation			Demand for Reformation			Supply of Reformation			Fixed Effects		
	Protestant in 1530 (1)	Protestant in 1560 (2)	Protestant in 1600 (3)	Protestant in 1530 (4)	Protestant in 1560 (5)	Protestant in 1600 (6)	Protestant in 1530 (7)	Protestant in 1560 (8)	Protestant in 1600 (9)	Protestant in 1530 (10)	Protestant in 1560 (11)	Protestant in 1600 (12)
Printing press by 1500	0.097*** (0.026)	0.233*** (0.045)	0.295*** (0.054)	0.042 (0.036)	0.087 (0.059)	0.152** (0.061)	0.018 (0.027)	0.013 (0.036)	0.050 (0.038)	0.001 (0.091)	0.099** (0.045)	0.126*** (0.030)
Log population in 1500				-0.069** (0.030)	-0.151*** (0.030)	-0.130*** (0.031)	-0.042*** (0.016)	-0.086*** (0.028)	-0.090*** (0.027)	-0.004 (0.049)	-0.001 (0.022)	-0.027 (0.018)
Free Imperial City				0.185* (0.111)	0.465*** (0.099)	0.509*** (0.084)	0.053 (0.048)	0.332*** (0.096)	0.485*** (0.072)	0.026 (0.136)	0.242*** (0.081)	0.322*** (0.088)
University				-0.010 (0.056)	0.087 (0.076)	-0.028 (0.077)	-0.027 (0.036)	0.055 (0.048)	-0.017 (0.056)	-0.080 (0.127)	-0.017 (0.066)	-0.036 (0.070)
Bishop				-0.082*** (0.028)	-0.207*** (0.047)	-0.299*** (0.055)	-0.047** (0.022)	-0.121*** (0.035)	-0.173*** (0.034)	-0.053 (0.090)	-0.135* (0.069)	-0.091* (0.046)
Lay magnate				-0.131* (0.076)	0.019 (0.104)	0.054 (0.112)	-0.115*** (0.044)	0.091* (0.052)	0.159*** (0.055)	-0.193* (0.103)	0.135** (0.055)	0.171*** (0.049)
Market potential							-0.026*** (0.006)	-0.021*** (0.004)	-0.005 (0.005)	-0.058*** (0.019)	-0.031*** (0.009)	-0.024*** (0.008)
Water							0.011 (0.017)	0.082** (0.033)	0.144*** (0.034)	-0.029 (0.066)	0.008 (0.034)	0.007 (0.028)
Hanseatic							0.071** (0.033)	0.120* (0.069)	0.193*** (0.061)	-0.079 (0.115)	-0.043 (0.059)	-0.010 (0.062)
Log distance to Wittenberg							-0.103*** (0.021)	-0.197*** (0.024)	-0.237*** (0.035)	-0.131** (0.063)	-0.306*** (0.041)	-0.394*** (0.036)
Log distance to Zürich							-0.114*** (0.027)	-0.042 (0.037)	0.049 (0.046)	-0.224 (0.156)	-0.002 (0.062)	-0.051 (0.055)
Imperial Circle Dummies	N	N	N	N	N	N	N	N	N	Y	Y	Y
Nation (as of 1500) Dummy	N	N	N	N	N	N	N	N	N	Y	Y	Y
Observations	753	753	753	753	753	753	753	753	753	200	352	307
Number of clusters	205	205	205	205	205	205	205	205	205	102	157	147
(pseudo) R <sup>2</sup>	0.02	0.04	0.06	0.14	0.16	0.18	0.44	0.46	0.46	0.21	0.61	0.67

Robust standard errors clustered by territory in parentheses. The first three columns are a linear probability model; the rest are probit with average marginal effects reported; in the final three columns, marginal effects are reported as the Electoral Imperial Circle equaling 1 and all other dummies equaling 0. A constant term is included in all regressions except for first three columns. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

# Printing and Reformation

TABLE IV  
REGRESSION ANALYSIS OF PRINT MEDIA AND LOG CITY GROWTH

(1)	Dependent Variable Is Log City Growth			
	Pre-Adoption	Post-Adoption		
	(2)	(3)	(4)	(5)
Independent Variable	Growth 1400–1500	Growth 1500–1600	Growth 1500–1700	Growth 1500–1800
Print Adoption 1450–1500	0.07 (0.08)	0.19*** (0.06)	0.26*** (0.08)	0.30*** (0.09)
Editions Per Capita	0.03 (0.03)	0.03* (0.02)	0.04 (0.03)	0.05 (0.03)
University	-0.12 (0.11)	0.02 (0.07)	0.17* (0.09)	0.17* (0.09)
Roman Site	0.08 (0.06)	-0.01 (0.05)	0.09 (0.08)	0.04 (0.07)
Capital	0.31** (0.13)	0.95*** (0.16)	1.46*** (0.20)	1.98*** (0.27)
Freedom Index	-0.23 (0.14)	0.27*** (0.10)	0.29** (0.13)	-0.07 (0.14)
Atlantic Port	0.16 (0.18)	0.34*** (0.09)	0.64*** (0.14)	0.76*** (0.12)
Mediterranean Port	0.21* (0.13)	0.15 (0.12)	0.57*** (0.15)	0.65*** (0.17)
Baltic Port	-0.16 (0.18)	0.25** (0.12)	0.55** (0.22)	0.37 (0.24)
Navigable River	0.14* (0.08)	0.18*** (0.06)	0.23*** (0.09)	0.39*** (0.09)
Log Population	-0.22*** (0.04)	-0.30*** (0.04)	-0.42*** (0.05)	-0.64*** (0.05)
Country FE	Yes	Yes	Yes	Yes
Observations	291	495	515	622
R Squared	0.33	0.32	0.35	0.47

TABLE VII  
INSTRUMENTAL VARIABLE ANALYSIS OF PRINTING AND LOG CITY GROWTH

(1)	(2)	(3)
	1st Stage Adopt Print 1450–1500	2nd Stage City Growth 1500–1600
Regression Model		
Log Distance to Mainz	−0.06*** (0.01)	
Adopt Print 1450–1500		0.58** (0.29)
Observations	410	410
<i>R</i> squared	0.34	0.15
<i>F</i> Statistic (IV)	20.74***	82.07***

# Printing and Reformation

- So Basten and Betz give us pretty compelling evidence that economic attitudes differ across religions, particularly the divergence in religious beliefs ushered in during the Reformation
- Rubin offers evidence that these changes in beliefs weren't simply decisions of the state or other leaders, rather exogenous shocks like the introduction of the printing press could drive the changes
- This same technological change also drives city growth, hinting at more potential economic effects of the Reformation

# Religious Restrictions on Economic Activity

- Let's move from thinking about religion influencing economic attitudes to religion directly regulating economic activity
- This is another big area of research, particularly in economic history
- One question in the literature is whether differences between Christianity and Islam in the approach to commerce can account for differences in economic development
- We'll look at two articles thinking about this, "Institutions, the Rise of Commerce and the Persistence of Laws: Interest Restrictions in Islam and Christianity" by Rubin and "The Islamic Commercial Crisis: Institutional Roots of Economic Underdevelopment in the Middle East" by Kuran

# Religious Restrictions on Economic Activity



# Religious Restrictions on Economic Activity

State	Loan Type	Loan Amount	Lien Type	Maximum Interest Rate	Citation
	Loan secured by obligor's homestead	Any	Any	Any	TEX. FIN. CODE ANN. § <a href="#">303.301(2)</a> (West 2011)
	Any	Any	Any	<p>≤ 18% a year if weekly ceiling is &lt; 18% a year                      ≤ 24% a year if weekly ceiling is &gt; 24% per year</p> <p>Weekly ceiling computed by:                      (1) Multiplying auction rate<sup>98</sup> by 2; and                      (2) Rounding result to nearest one-quarter of 1%</p>	TEX. FIN. CODE ANN. §§ <a href="#">303.003(a)</a> & <a href="#">303.009(a)-(b)</a> (West 2011)
<b>Utah</b> <a href="#">(Click to return to Table of Contents)</a>	Federally Related Mortgage Loans	Any	First	Exempt from state limitations	12 USCA §§ <a href="#">1735f-7</a> & <a href="#">1735f-7a</a> 12 CFR §§ <a href="#">590.1</a> through <a href="#">590.101</a>
	Consumer Credit Agreement	Any	Any	As agreed but not unconscionable	UTAH CODE ANN. §§ <a href="#">70C-2-101</a> & <a href="#">70C-7-106</a> (West 2012)
<b>Vermont</b> <a href="#">(Click to return to Table of Contents)</a>	Federally Related Mortgage Loans	Any	First	Exempt from state limitations	12 USCA §§ <a href="#">1735f-7</a> & <a href="#">1735f-7a</a> 12 CFR §§ <a href="#">590.1</a> through <a href="#">590.101</a>
	Single Payment Loans regulated by Title 8 and federal savings and loan associations	Any	Any	≤ 18% per annum	VT. STAT. ANN. tit. 9, § <a href="#">41a(b)(1)</a> (West 2013)
	Loan	Any	Any	≤ 12% per annum	VT. STAT. ANN. tit. 9, § <a href="#">41a(a)</a> (West 2013)
	Loan secured by mobile home	Any	Any	≤ 18% per annum	VT. STAT. ANN. tit. 9, § <a href="#">41a(b)(4)</a> (West 2013)



# Religious Restrictions on Economic Activity

- Usury laws are fairly common today, intended to protect borrowers from unscrupulous lenders
- It is also a topic that appears across a wide range of religious texts, including Jewish, Islamic and Christian texts
- Typically, usury is considered immoral; you are taking advantage of another's misfortune
- A big difference with modern statutes is that at some points in history, some religions considered any interest immoral
- Think about what this does for economic development (or even just for getting student loans)

# Announcements



# Announcements

- Response papers are being graded, I hope to finish grading this weekend
- The Print Shop is hard at work on your Academic Festival cards (all the websites are set up)
- The Academic Festival itself will be in Sadler on 4/24 from 5pm to 7pm
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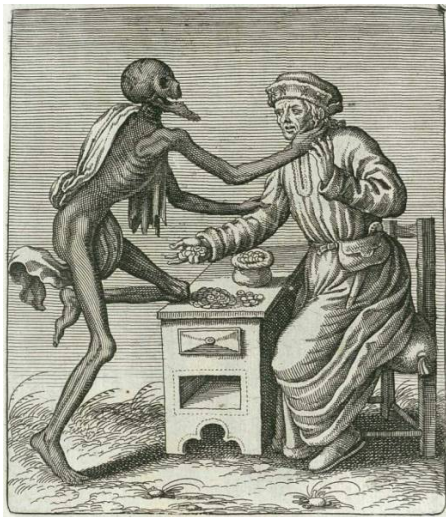
- Send slides to me by Sunday night by email (Powerpoint, Google Slides, or pdf), no video/audio/crazy transitions just to ensure compatibility

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# Religious Restrictions on Economic Activity



# Religious Restrictions on Economic Activity



# Interest Restrictions in Western Christianity

- The Church bans taking interest in the fourth century CE, it becomes official with Canon 17 of the first Ecumenical Council in 325
- The Church maintains the interest ban at the Second, Third and Fourth Lateran Councils (1139, 1179, 1215)
- Usurers were ineligible to hold public office, honours or testify in court; they could be expelled, prevented from renting property, and have their wills invalidated
- However, in the thirteenth century, secular authorities start permitting moderate interest
- More and more types of loans become acceptable and the religious stance against interest softens
- At Lateran V (1512-1517) the Church officially sanctioned the monte di pietà, the pious pawn bank



# Interest Restrictions in Islam

- Prohibition of interest has always been a part of Islamic doctrine
- Unlike Western Christianity, this prohibition has never disappeared
- Does this mean that loans were never made in the Islamic world?
- Not really, there were often *hiyal*, devices that facilitated the evasions of interest bans
- One example, the *mukhātara*, the double sale

The art of the double sale:

- I want to borrow \$100 from you and pay you back in a week
- You want to charge me 10% interest
- I sell you a trinket for \$100, you pay me in cash
- You then immediately sell me the trinket back for \$110
- I'll give you the \$110 next week

# Interest Restrictions and Economic Development

- So with things like the double sale, do interest restrictions matter?
- Probably, making business transactions convoluted is likely inefficient
- Having to do things somewhat outside the rules also makes it hard to scale up business dealings to involve more people and bigger deals
- It also potentially makes it harder to enforce various contracts if they are built around evading formal rules

## Other Limitations on Commerce

- Kuran (2003) points to even bigger restrictions on commerce under Islamic rules
- These other restrictions can't be solved by something as simple as a double sale
- In particular, Kuran is going to focus on rules surrounding inheritances and business partnerships
- The main issue is that Islamic law did not incorporate the concept of the *corporation*

# Other Limitations on Commerce



# Other Limitations on Commerce



SCC819  
(06/14)

Print Form

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION  
ARTICLES OF INCORPORATION  
OF A VIRGINIA NONSTOCK CORPORATION

Clear Form

The undersigned, pursuant to Chapter 10 of Title 13.1 of the Code of Virginia, state(s) as follows:

1. The name of the corporation is \_\_\_\_\_  
\_\_\_\_\_
2. (Mark appropriate box or insert applicable provisions; see instructions.)  
 The corporation shall have no members. **OR**  
 The corporation shall have one or more classes of members with such designations, qualifications and rights as set forth in the bylaws. **OR**  
 The designation of the class(es) of members and the members' qualifications and rights are as follows:  
\_\_\_\_\_  
\_\_\_\_\_
3. (Mark appropriate box or insert applicable provisions; see instructions.)  
 The directors shall elect their successors. **OR**  
 The directors shall be elected by the members. **OR**  
 The directors shall be elected or appointed as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. A. The name of the corporation's initial registered agent is \_\_\_\_\_  
\_\_\_\_\_
- B. The initial registered agent is (mark appropriate box):  
(1) an individual who is a resident of Virginia **and**  
 an initial director of the corporation. **OR**  
 a member of the Virginia State Bar.  
(2)  a domestic or foreign stock or nonstock corporation, limited liability company or registered limited liability partnership authorized to transact business in Virginia.
5. A. The corporation's initial registered office address, including the street and number, if any, which is identical to the business office of the initial registered agent, is \_\_\_\_\_  
\_\_\_\_\_

## Articles of Incorporation of a Virginia Nonstock Corporation

Kumar's characterization of potentially useful aspects of business partnerships under Islamic law:

- Family enterprises or partnerships, not corporations
- Single-venture partnerships (*mudāraba*), say between a sedentary investor and a merchant
- Financing could be done by one or both partners
- Partners negotiate how profits will be split in advance
- Merchant was not liable for losses unless he contributed to initial investment
- All kinds of profit-sharing and restrictions on the merchant's mandate were possible

# Limitations on Commerce

- These all sound like good things for promoting commerce
- Kuran notes the similarities to partnership rules in the maritime cities of Italy (*commenda*) which have similar features intended to promote commercial activity
- He contrasts the *mudāraba* with the *'isqa*, a contractual form found in the Talmud
- The *'isqa* required equality between investor and merchant in terms of either profit shares or liability
- Here we see fairness potentially clashing with efficiency, with different religions taking different approaches that will impact economic development (see also Abramitzky's research on the kibbutz)



# Limitations on Commerce

- So if these Islamic partnership rules are designed to facilitate productive partnerships between investors and merchants, where is the problem?
- As Kuran notes, it gets back the idea of the corporation
- Obligations almost always fell on individual partners, not the partnership as a whole
- Even more problematic, Islamic partnership ended with the death of any one member
- Think about what this would mean for a large, modern day corporation or for entering any long-term contracts

# Limitations on Commerce



Wellington R. Burt, 1831-1919, and his Golden Egg

# Limitations on Commerce

- One more feature of Islamic law Kuran points to is the inheritance system
- Islamic law restricted the way you could distribute your estate, limiting the individual's testamentary privileges to one-third of his or her estate, reserving the rest for family
- On the positive side, scholars note that this has tended to equalize the distribution of wealth and reduce intrafamily tension
- But it also makes it difficult to make increasingly large business ventures if wealth must be divided with each death
- Once again, the lack of the corporation constrains the development of large-scale commercial enterprise

# Institutional and Economic Divergence

- So the disappearance of interest bans in Western Christianity and their continued presence in Islam may have conferred an economic advantage to Western Europe
- But if both started with bans, why did they follow different paths? What's causing what here?
- Likewise, the development of the corporation facilitated economic growth in Europe
- But the incentives to develop the corporation would have been similar in the Islamic world
- Why did the concept of the corporation not take hold?

# Institutional and Economic Divergence

- Rubin thinks the answer is in part about where political authorities derived their legitimacy from
- He argues that early Islamic political authorities were more dependent on religious authorities for legitimacy than European political authorities
- Europe benefited from a feedback mechanism in which the rise of commerce led to a relaxation of interest restrictions and diminished the Church's ability to legitimize political authorities
- This ultimately led to more commercially beneficial rules and regulations in Europe

# Institutional and Economic Divergence

- Kuran focuses on a slightly different feedback mechanism
- The more durable partnerships in Europe and the possibility for more complicated ways to transferring estates necessitated the development of organizational complexity (think accounting, laws, financial institutions, etc.)
- This complexity then aided the development of bigger, more complicated commercial ventures

# Institutional and Economic Divergence

- By contrast, the Islamic rules led to ventures staying smaller and more personal
- Investors relied on personal relations more heavily, making them less likely to develop the impersonal, complex commercial institutions fueling modern growth
- This brings us full circle, right back to the very issues raised by North in our first weeks of class