# Announcements

- Welcome back from spring break!
- Your response paper is due tomorrow at **5pm**, please submit through the link under 'Assignments'
- Some other relevant upcoming dates:
  - March 25th: Selena Fox class visit
  - March 27th: Selena Fox main talk
  - April 3rd and 4th: Group work days
  - April 17th: Group projects due
  - April 24th: Academic Festival
- Don't forget to be working on your projects, let me know if you have questions

# Announcements

- We're wrapping up our institutions and long run development section and starting on institutional persistence
- I've posted a revised version of the reading list that is a bit slimmed down given how many lectures are left
- We may still need to make a couple of additional cuts depending on how things go
- Next required reading: Nunn (2008) "The Long-Term Effects of Africa's Slave Trades" *Quarterly Journal of Economics*
- Next quiz will be Wednesday, March 20th and will cover Nunn (2008) and this week's lectures

# COLL 300

- Let's take a moment to reflect on our first COLL 300 visitors
- A few things that I've been thinking about:
  - Language
  - Ceremony and remembrance
  - Ceremony and resistance
  - Populism and economic or social divisions
- We'll be circling back to these themes when we discuss the economics of religion in a couple of weeks
- Expect the next visits to be very different (that is the nature of on-campus COLL 300)

# Colonial Origins of Comparative Development

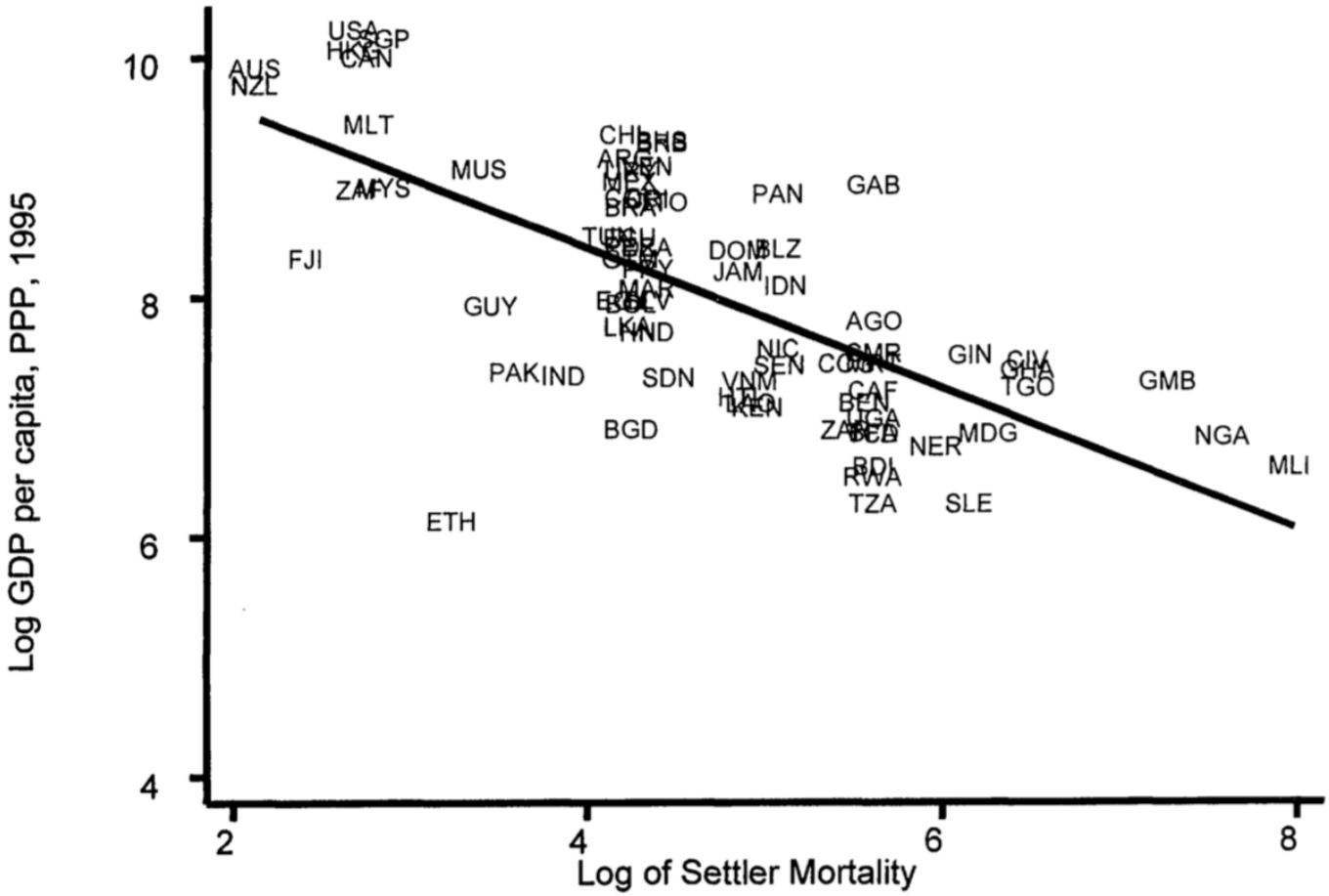
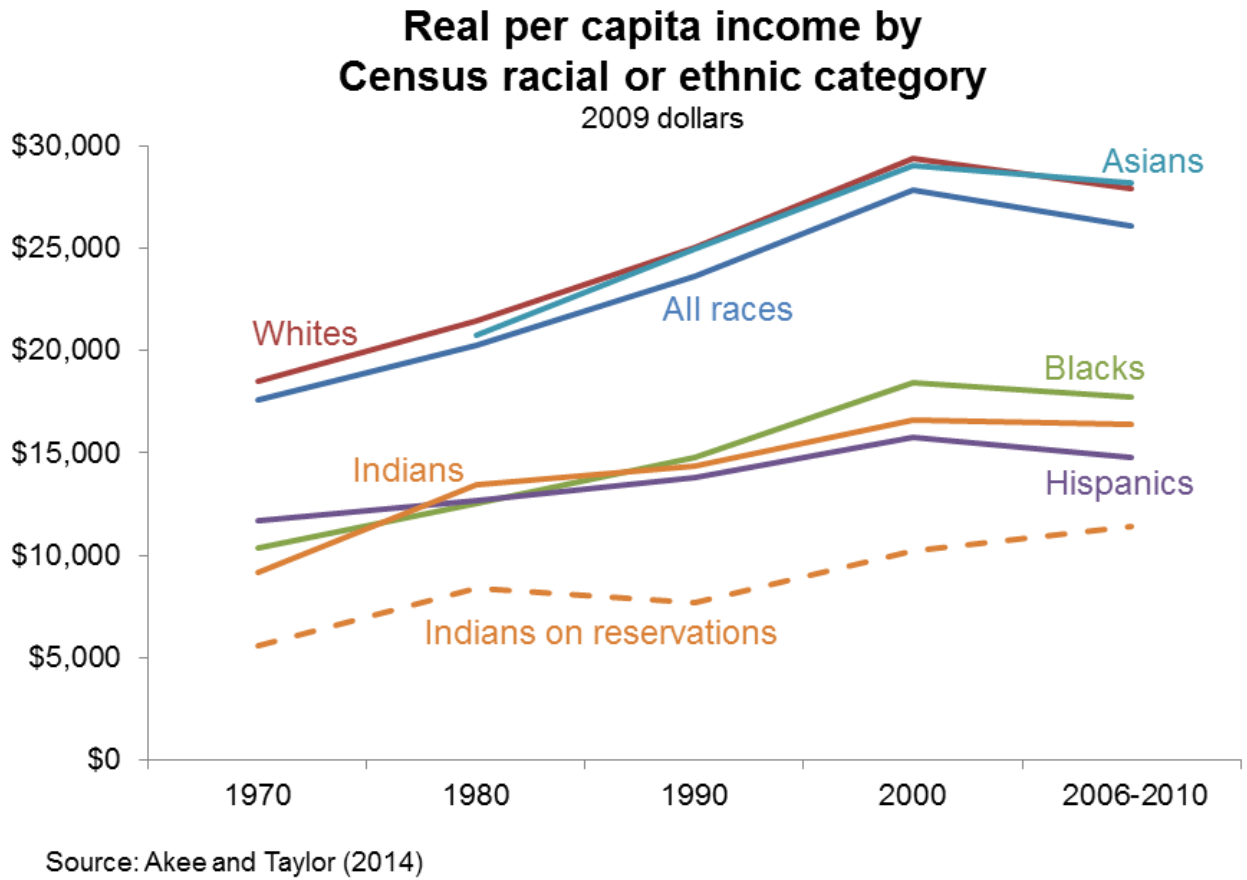


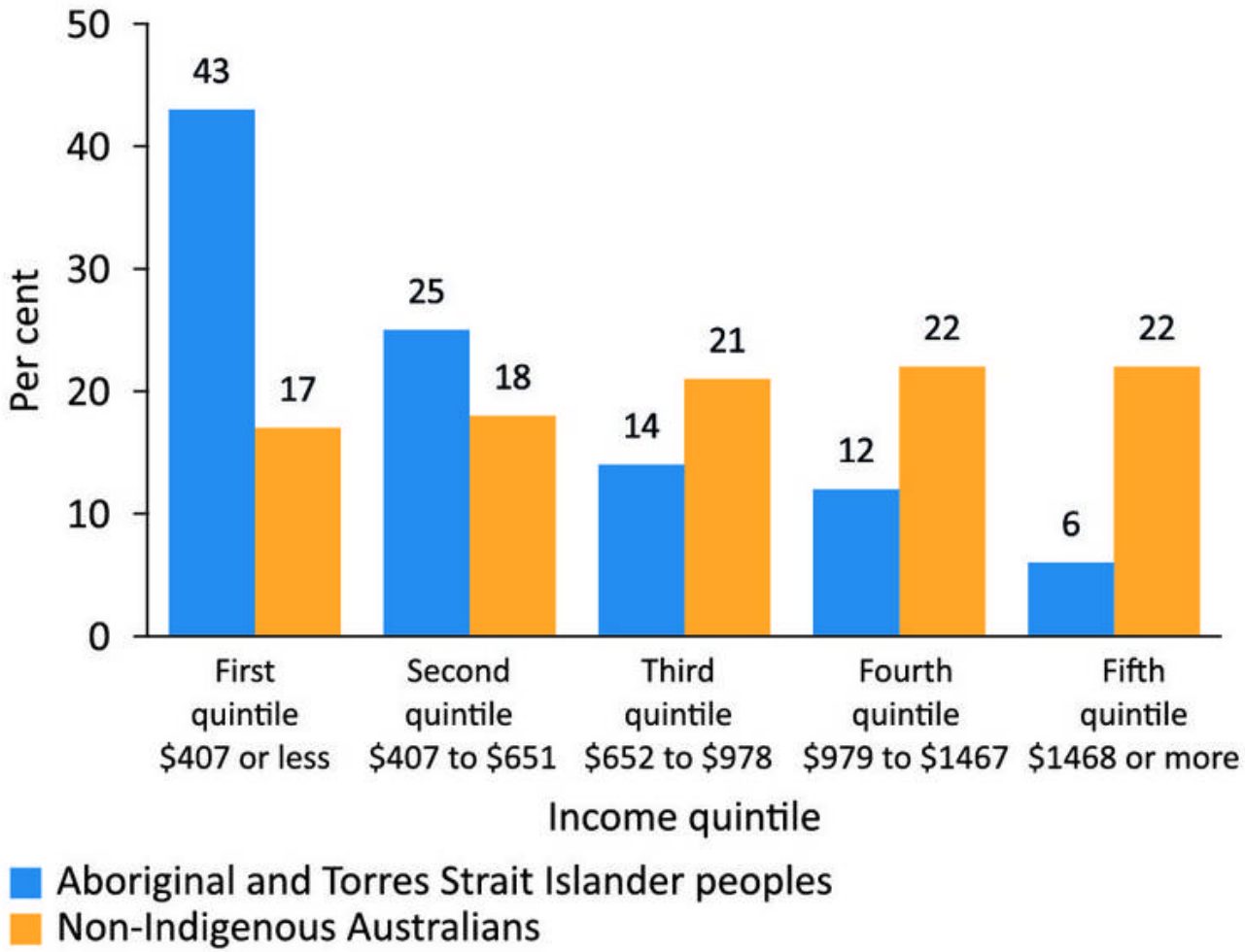

FIGURE 1. REDUCED-FORM RELATIONSHIP BETWEEN INCOME AND SETTLER MORTALITY

# Colonial Origins of Comparative Development



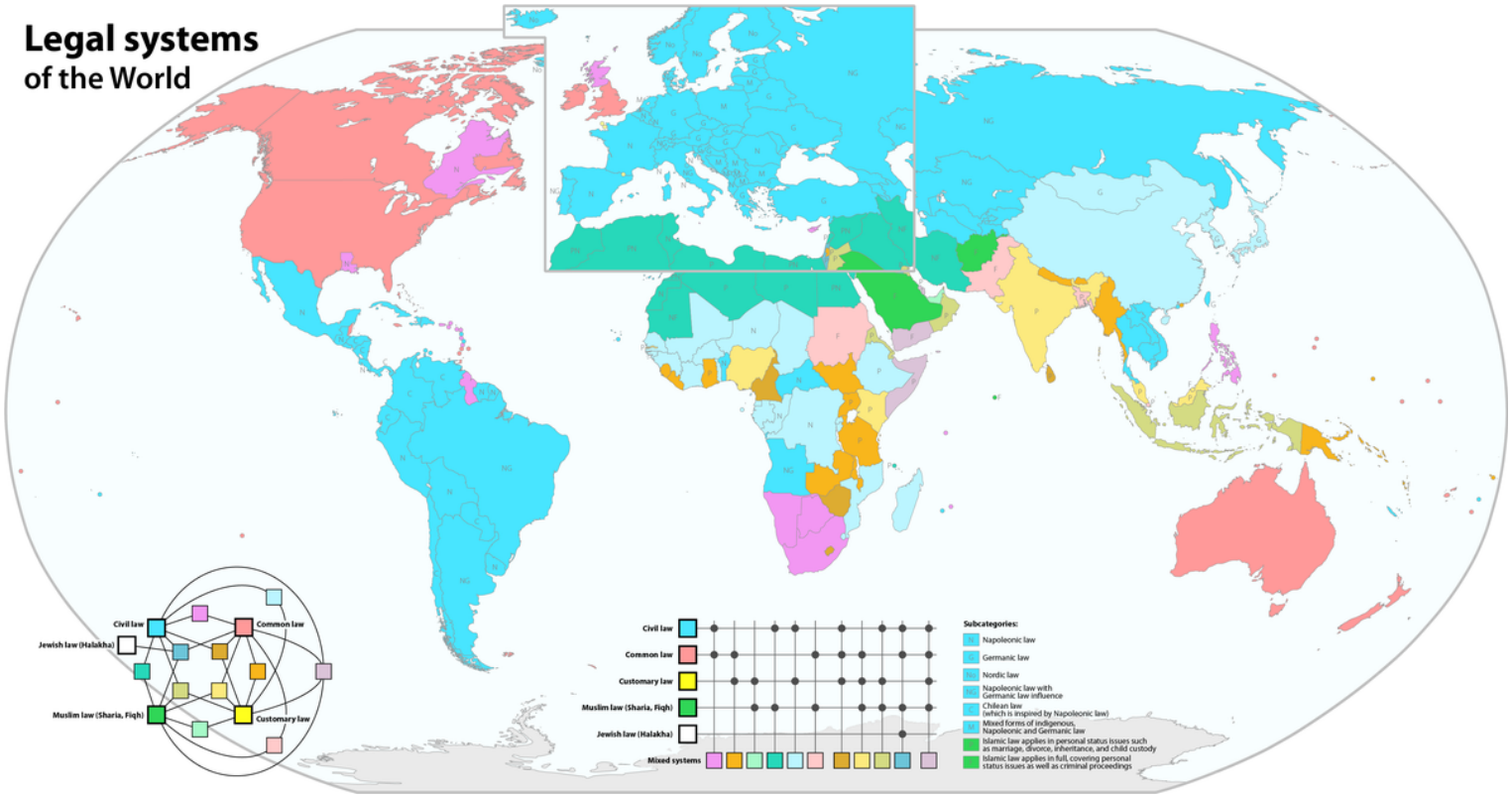

Source: Akee and Taylor (2014) "Social and Economic Change on American Indian Reservations"

# Colonial Origins of Comparative Development




Source: Australia Government, Department of the Prime Minister and Cabinet, Aboriginal and Torres Strait Islander Health Performance Framework 2014 Report

# Colonial Origins of Comparative Development




Source: Maximilian Dörrbecker

# Colonial Origins of Comparative Development

- Let's recap the basic argument
  1. Different types of colonization policies created different sets of institutions, ranging from extractive states to neo-Europes
  2. The colonization strategy was influenced by the feasibility of settlements
  3. Some dimensions of that feasibility were effectively randomly assigned (settler mortality) giving us a natural experiment
  4. Colonial institutions persisted even after independence
- Do we buy each of these points?

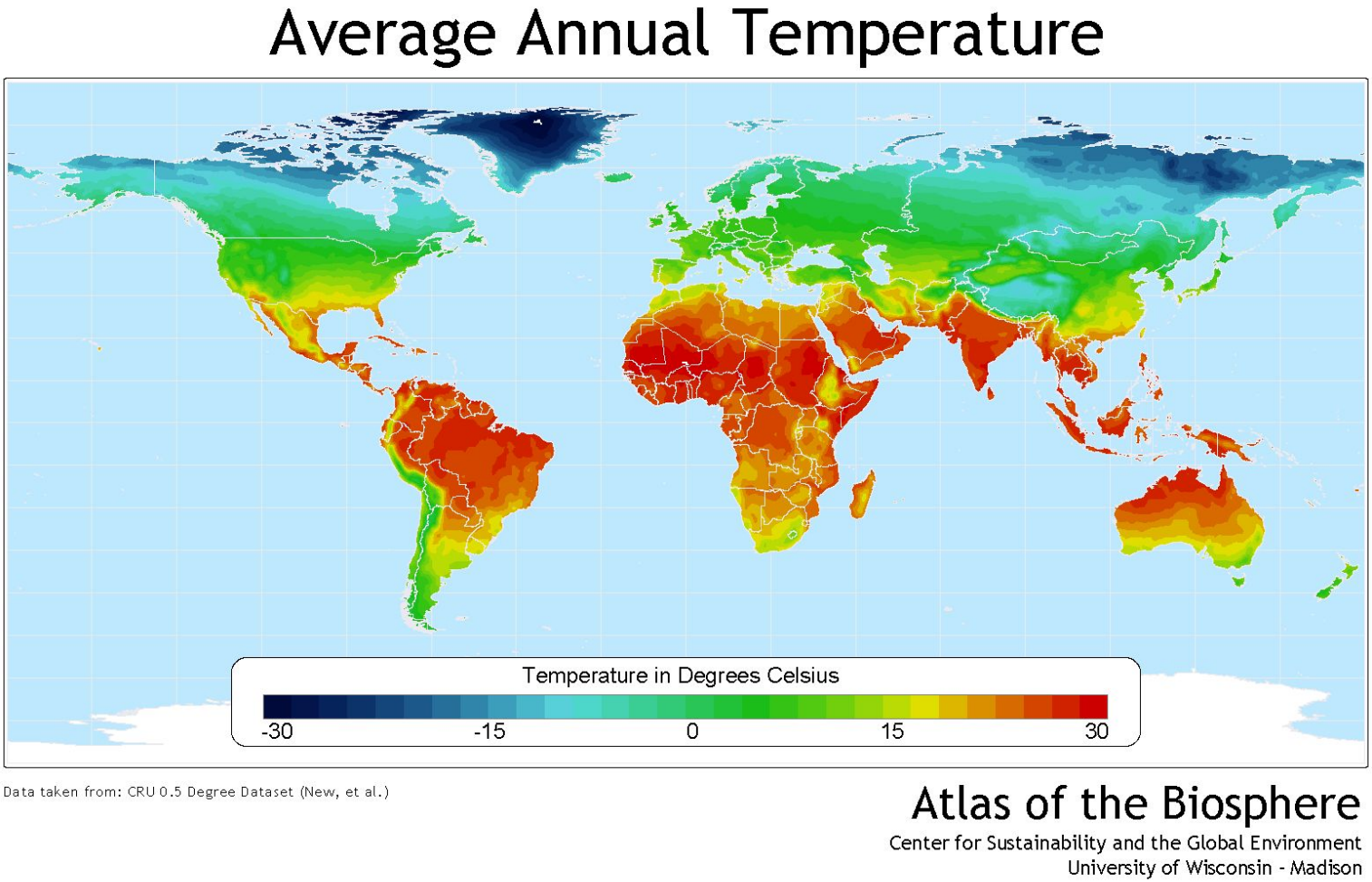
# Wait a Second...

- For us to buy Acemoglu, Johnson and Robinson's results, we need the *exclusion restriction* to hold
- In this case, the exclusion restriction can be stated as:

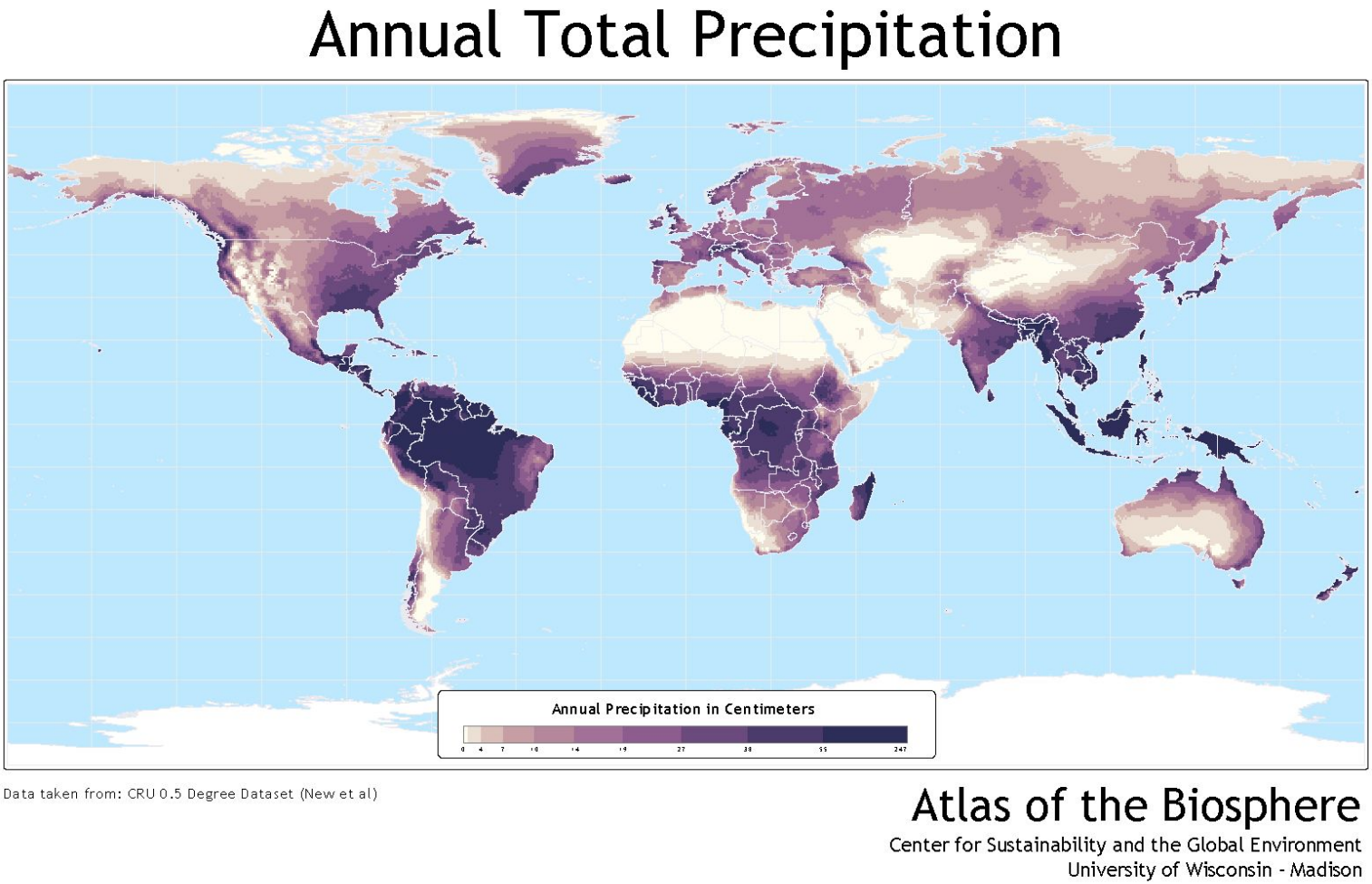
  > *Conditional on the controls included in the regression, the mortality rates of European settlers more than 100 years ago have no effect on GDP per capita today, other than their effect through institutional development.*

- Where might we run into trouble here?

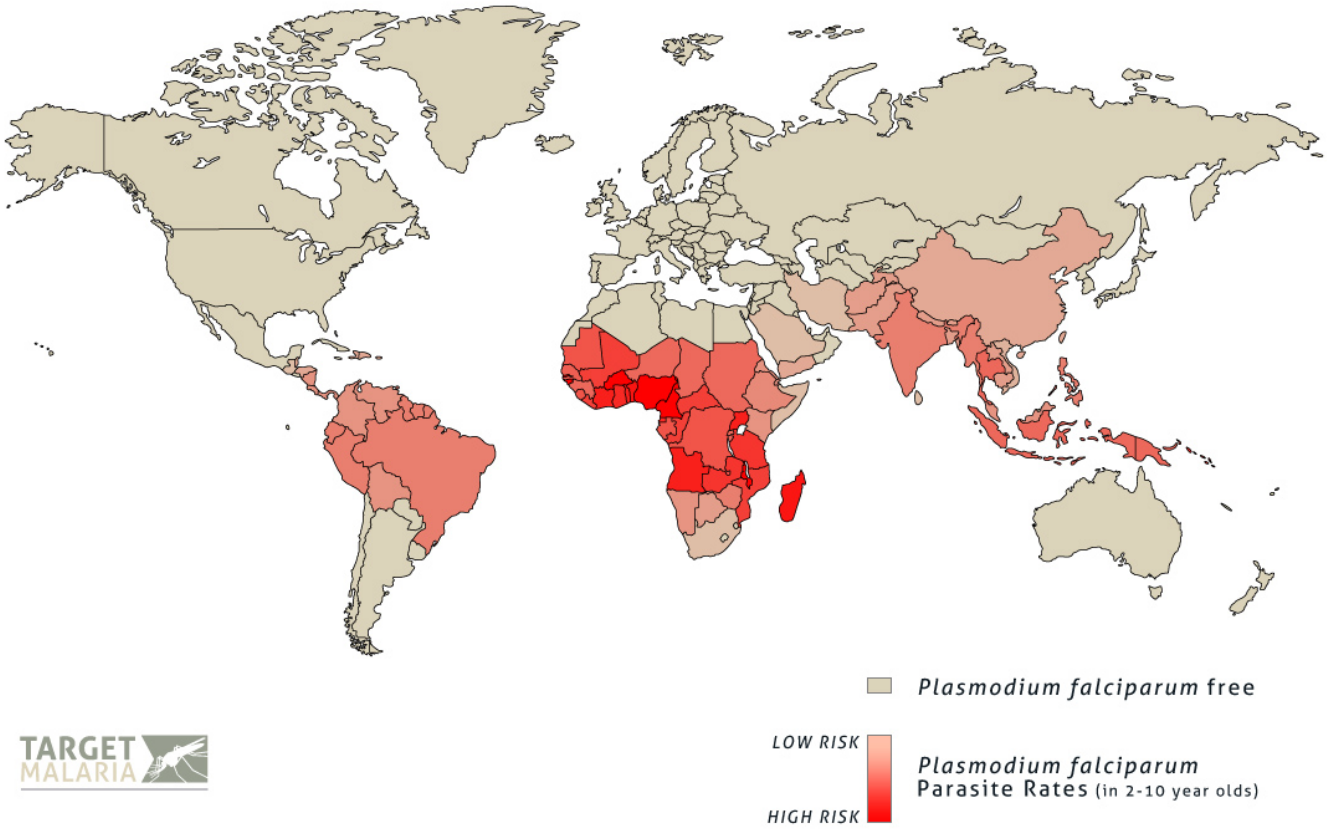
# Wait a Second...



# Wait a Second...



# Wait a Second...



# Wait a Second...

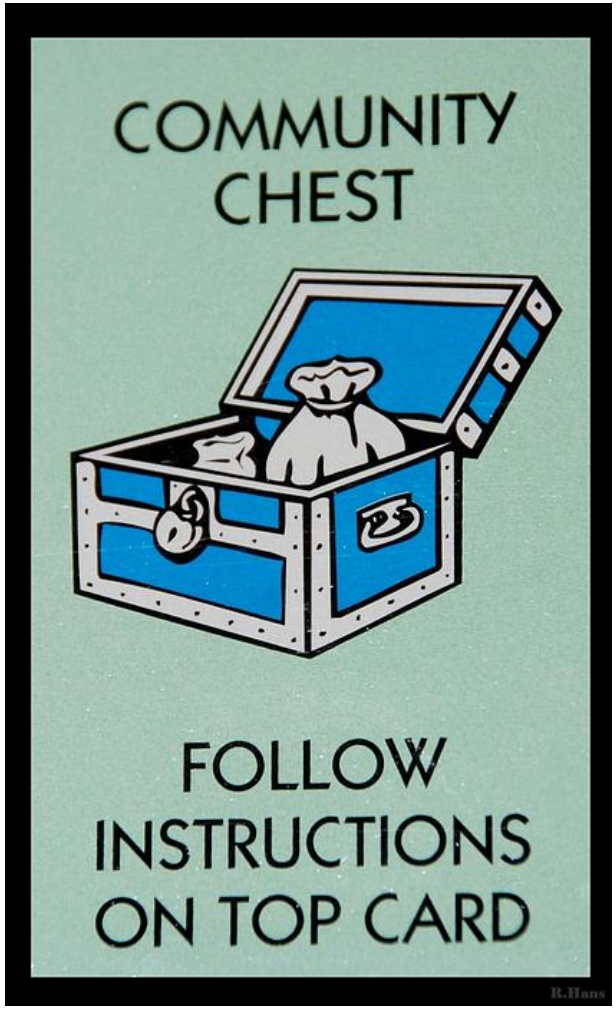
- Acemoglu, Johnson and Robinson are going to throw in a variety of controls and alternative specifications to help alleviate these fears
- But is there stronger evidence we can point to? Something with cleaner, more random variation in institutions?
- Perhaps a narrower situation where we could look at differences within a country over a shorter period of time?
- Let's take a look at Dittmar and Meisenzahl (2017) "Public goods institutions, human capital and growth: Evidence from German history" (forthcoming, *Review of Economic Studies*)

# The Reformation as Experiment

# The Reformation as Experiment

- Luther publishes his Ninety-five Theses in 1517, much of which concerned the selling of indulgences
- What we're concerned with are the new public goods institutions associated with the Reformation
- Reformation cities adopted *Kirchenordnungen*, a church ordinance law containing interlocking requirements:
  - Expanded the set of services provided by the state
  - Transferred control of service provision from the Catholic Church to secular state authorities
  - Institutionalized anti-corruption and oversight rules to improve quality and prevent misappropriation of pubic and church finances
- This led to more investment in schools, poor-houses and hospitals

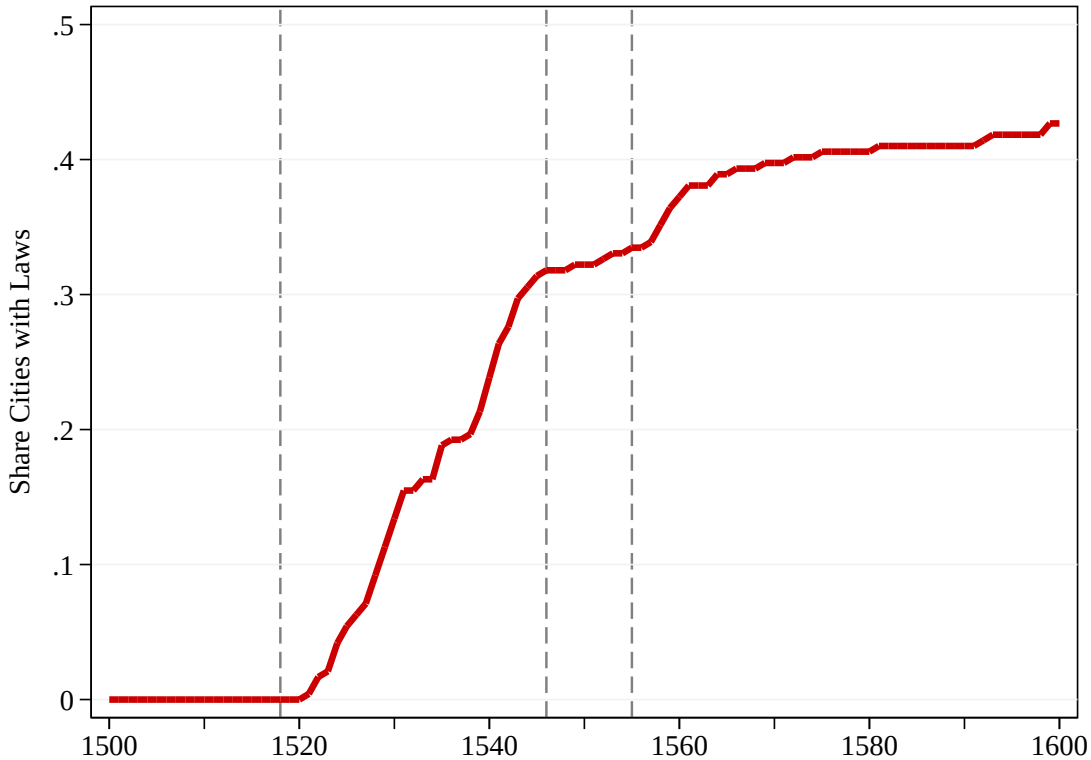
# The Reformation as Experiment



# The Reformation as Experiment

# The Reformation as Experiment

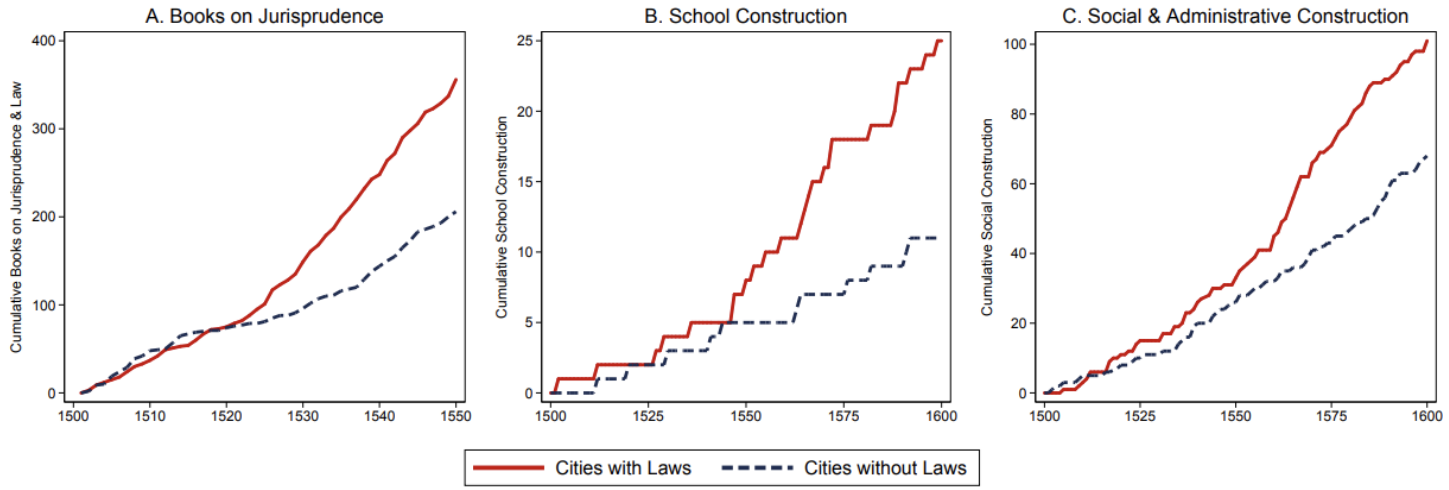
Figure 2: The Share of Cities with Reformation Laws




This graph shows the share of cities with a Reformation Law. Vertical lines mark the mass circulation of Luther's ideas in 1518, the Schmalkaldic War of 1546, and the Peace of Augsburg in 1555.

# The Reformation as Experiment

Figure 1: Jurisprudence and Construction

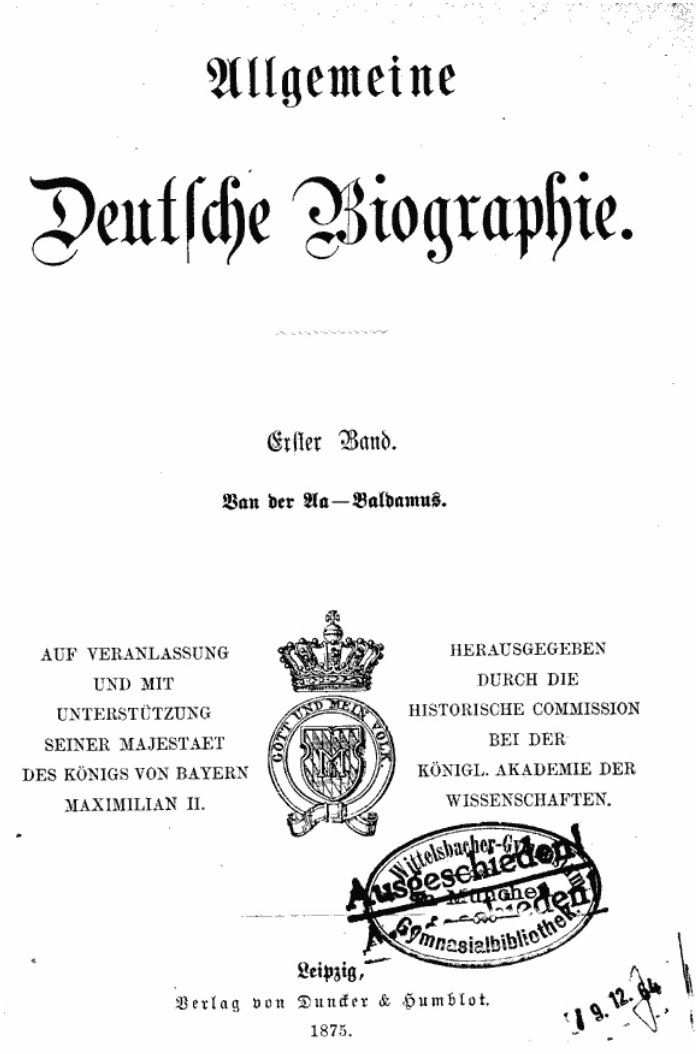



This graph shows the cumulative number of (A) jurisprudence publications, (B) new school construction, and (C) administrative and social welfare construction in cities that did and did not adopt public goods institutions, measured by the passage of a church ordinance (cities with and without "Laws"). Publication and construction data are from the *Universal Short Title Catalogue* and the *Deutsches Städtebuch*, respectively, for the 239 German cities we study in this paper. We classify all new school construction as "School Construction" and all construction of buildings used by city governments and in non-education social welfare and service provision as "Social & Administrative Construction".

# The Reformation as Experiment

- Dittmar and Meisenzahl want to look at the effects of these Reformation institutions
- In particular, they want to think about whether these institutions made Reformation cities more productive (basically the question we have been asking)
- But there are two big, big empirical problems to deal with:
  - Measurement of relevant outcomes
  - Identifying causality
- They are going to find clever solutions to both of these problems

# The Reformation as Experiment - Measurement



Allgemeine

Deutsche Biographie.

Erster Band.

Aa—Baldamus.

AUF VERANLASSUNG
UND MIT
UNTERSTÜTZUNG
SEINER MAJESTAET
DES KÖNIGS VON BAYERN
MAXIMILIAN II.

HERAUSGEGEBEN
DURCH DIE
HISTORISCHE COMMISSION
BEI DER
KÖNIGL. AKADEMIE DER
WISSENSCHAFTEN.



Leipzig,
Verlag von Duncker & Humblot.
1875.

WIKIPEDIA

# Price V. Fishback

**Price V. Fishback** (born c. 1955) is an economic historian. He is a professor of Economics at the University of Arizona and a research associate at the National Bureau of Economic Research. His research on American economic history has included employment and labor in the nineteenth and early twentieth centuries especially in the coal industry, and government programs of the New Deal. His work has been recognised by the Cliometric Society via their awarding him a *Clio Can* in recognition of his "exceptional support of cliometrics".[1][2] Prior to arriving to the University of Arizona, Fishback was an Assistant and later Associate Professor at the University of Georgia.

| Price V. Fishback | |
|---|---|
| **Citizenship** | United States |
| **Institution** | University of Arizona |
| **Field** | Economic History<br>Labor Economics<br>Political Economy<br>Law and Economics |
| **Alma mater** | University of Washington<br>Butler University |
| **Doctoral advisor** | Robert Higgs |

## Contents



## Education

Fishback received a B.A. with honors in Mathematics and Economics from Butler University in 1977. He then received his M.A. and Ph.D. from the University of Washington in 1979 and 1983, respectively. His Ph.D. Thesis was entitled "Employment Conditions of Blacks in the Coal Industry, 1900-1930." His advisor was Robert Higgs.[3]

## Selected publications

- Fishback, P. V.; Kantor, Shawn E. (2000). *Prelude to the Welfare State: The Origins of Workers' Compensation*. Chicago: University of Chicago Press.
- Fishback, P. V. (1992). *Soft Coal, Hard Choices: The Economic Welfare of Bituminous Coal Miners, 1890 to 1930*. New York: Oxford University Press.
- *Well Worth Saving: How the New Deal Safeguarded Home Ownership*, with Jonathan Rose and Kenneth Snowden. 2013. Chicago, IL: University of Chicago Press.
- "The Newest on the New Deal" *Essays in Economic & Business History* 36(1) (2018) covers distribution and impact of spending and lending programs; online (http://www.ebhsoc.org/journal/index.php/journal/article/view/425)

## References

1. University of Arizona: Price V. Fishback (https://econ.arizona.edu/people/price-v-fishback) (Accessed Jan 2016)
2. National Bureau of Economic Research: Price V. Fishback (http://www.nber.org/people/price_fishback) (Accessed Dec 2011)
3. "PRICE VANMETER FISHBACK" (https://econ.arizona.edu/sites/default/files/persons/fishback.vita_.online2017.09.22.pdf) (PDF). *University of Arizona: Department of Economics.*

## External links

- Price V. Fishback (https://econ.arizona.edu/people/price-v-fishback), Department of Economics, University of Arizona
- Price V. Fishback (http://www.independent.org/aboutus/person_detail.asp?id=703) at The Independent Institute

# The Reformation as Experiment - Measurement

WIKIPEDIA

## Douglass North

**Douglass Cecil North** (November 5, 1920 – November 23, 2015) was an American economist known for his work in economic history. He was the co-recipient (with Robert William Fogel) of the 1993 Nobel Memorial Prize in Economic Sciences. In the words of the Nobel Committee, North and Fogel "renewed research in economic history by applying economic theory and quantitative methods in order to explain economic and institutional change."[1]

### Contents



### Biography

Douglass North was born in Cambridge, Massachusetts, on November 5, 1920. He moved several times as a child due to his father's work at MetLife. The family lived in Ottawa, Lausanne, New York City, and Wallingford, Connecticut.[2]

North was educated at Ashbury College in Ottawa, Ontario and the Choate School in Wallingford, Connecticut. He was accepted at Harvard at the same time that his father became the head of MetLife on the west coast, so North opted to go to University of California, Berkeley. In 1942, he graduated with a B.A. in General Curriculum-Humanities. Although his grades amounted to slightly better than a "C" average, he managed to complete a triple major in political science, philosophy and economics.[3]

A conscientious objector in World War II, North became a navigator in the Merchant Marine, traveling between San Francisco and Australia. During that time, he read economics and picked up his hobby of photography. He taught navigation at the Maritime Service Officers' School in Alameda during the last year of the war, and struggled with the decision of whether to become a photographer or an economist.[4]

North returned to UC Berkeley to pursue a PhD in economics. He finished his studies in 1952 as he began work as an assistant professor at the University of Washington.[4]

North died on November 23, 2015, at his summer home in Benzonia, Michigan from esophageal cancer at the age of 95.[5][6]

### Academic career

From 1952–56, North was an assistant professor of economics at the University of Washington, then from 1956–1960, an associate professor. In 1960 North became co-editor of the *Journal of Economic History*, popularizing Cliometrics (New Economic History), and from 1960–1983 he was Professor of Economics at the University of Washington where he also served as the chair of the economics department from 1967–70. In 1979 he served as the Petrobras Professor of Political Economy at Rice University, and in 1981–82 as the Pitt Professor of American History and Institutions at Cambridge University, before joining the faculty of Washington University in Saint Louis in 1983 as the Henry R. Luce Professor of Law and Liberty in the Department of Economics (where he also served as director of the Center for Political Economy from 1984 to 1990). He was the Bartlett Burnap Senior Fellow at the Hoover Institution at Stanford University.[5]

In 1993, he became the first economic historian to win the John R. Commons Award,[7] which was established by the International Honors Society for Economics in 1965.

A collection of North's papers is housed at the Rubenstein Library at Duke University.[7]

### Research agenda

Along with Ronald Coase and Oliver Williamson, he helped found the International Society for the New Institutional Economics (ISNIE)[8] which held its first meeting in St. Louis in 1997. His research included property rights, transaction costs, the institutional basis of markets, and economic organization in history as well as economic development in developing countries.

North served as an expert for the Copenhagen Consensus and as an advisor to governments around the world. He was engaged in research (with John J. Wallis of the University of Maryland and Barry Weingast of Stanford University) on how countries emerge from what they call "the natural state" and into long-run economic growth. He was a trustee of the Economists for Peace and Security and a special advisor to the non-profit organization Vipassi.

### Publications

#### *Institutions*

Douglass North's 1991 paper summarizes much of his earlier research relating to economic and institutional change. In this paper, North defines institutions as "humanly devised constraints that structure political, economic and social interactions".[9a] Constraints, as North describes, are devised as formal rules (constitutions, laws, property rights) and informal restraints (sanctions, taboos, customs, traditions, codes of conduct), which usually contribute to the perpetuation of order and safety within a market or society. The degree to which they are effective is subject to varying circumstances, such as a government's limited coercive force, a lack of organized state, or the presence of strong religious precept.

Section 2 of North's 1991 paper describes the economic development of societies as occurring in stages:

North begins with local exchange within the village. In this setting, specialization "is rudimentary and self-sufficiency characterizes most individual households", with small-scale village trade existing within dense social networks of informal constraints that facilitate local exchange, and a relatively low transaction cost. In this close-knit network "people have an intimate understanding of each other, and the threat of violence is a continuous force for preserving order ..."[9b]

With growth, the market extends beyond the village into larger, interconnected regions. As the participants of a transaction become more socially distant, the terms of exchange must be made more explicit. This increase in transaction costs necessitates institutions that reduce the risks of being cheated, either by raising "the benefits of cooperative solutions or the costs of defection".[9c]

As long-distance trade becomes more feasible, generally through caravans or lengthy ship voyages, individuals and groups experience occupational and geographic specialization. Society also experiences a rise of formal trading centers (temporary gathering places, towns or cities). From the development of long-distance trade arise two transactional cost problems.

The first transactional cost problem is agency: the transfer of one's goods or services outside the control of local rule leaves the rules of exchange undefined, the risk of unfair trade high, and the contracts within society unenforced. For this reason, sedentary merchants often would send their kin with the product to ensure its safe arrival and the fulfillment of agreed terms of exchange by the receiving party.

The second transactional cost problem is the enforcement of contracts. Historically this problem was met with either armed forces protecting ships or caravans, or use of tolls by local coercive groups. However, in modern societies, institutions acting cooperatively in the interest of free market trade provide protection for goods and enforcement of contracts. Negotiation and enforcement in alien parts of the world require the development of a standardized system of weights and measures.

As development continues, the rise of capital markets (and the protection of associated property rights), creates social capital and enables citizens to gain wealth. Technology plays an instrumental role in the continued development of manufacturing sectors, and acts to lower transaction costs in several ways. The most substantial benefits are generally the result of transportation improvements.

Eventually, society becomes overwhelmingly urban. This final stage of development specialization requires increasing percentages of the resources of the society to be active in the market so that the transaction sector becomes a large share of gross national product. Highly specialized forms of transaction organizations emerge at this stage. Globalized specialization and division of labor demand institutions to ensure property rights even when trading in neighboring countries enabling capital markets to develop "with credible commitment on the part of the players."[9]

North enumerates three primitive types of exchange:

- Tribal Society "relies on a dense social network" (Colson 1974, p. 59)
- Bazaars "high measurement costs; continuous effort at clientization; intensive bargaining at every margin"[9]
- Long-distance caravan trade illustrates the informal constraints that made trade possible in a world where protection was essential and no organized state existed.[10]

All three methods above are found to be much less likely to evolve than large urban societies.

North's paper concludes with a few intriguing questions which his paper aimed to address:

- What is it about informal constraints that give them such a pervasive influence upon the long-run character of economies?
- What is the relationship between formal and informal constraints?
- How does an economy develop the informal constraints that make individuals constrain their behavior so that they make political and judicial systems effective forces for third party enforcement?[9f]

#### *Transaction Costs, Institutions, and Economic Performance*

In a 1992 paper, North argues that neoclassical economic theory overlooks the institutions required to create efficient markets with low monitoring and transaction costs.[11a] He develops a framework for explaining how institutions change and become more efficient over time.

North theorizes that all transaction costs are rooted in information asymmetries between the parties to an exchange. Hence, each person must expend resources ascertaining the qualities of the good she is buying and enforcing the terms of the trade. Because these costs pose such a large barrier to economic growth, a central function of political and economic institutions is control them, often by disincentivizing fraud, theft, and other socially detrimental behaviors. Yet those who command the political system will structure these institutions to maximize their personal benefit, rather than the social benefit, so transaction costs will not always be minimized by existing institutions.[11a]

Importantly for North, individuals and organizations make their decisions on the basis of imperfect ideologies, which are "mental models" for how the world functions. Therefore, the politicians who craft institutions will, despite their best efforts, occasionally fail to maximize their personal gain. When this happens, entrepreneurs who believe that institutional changes will significantly benefit them will enter the political realm to effect this change. The result is incremental institutional change, pushed forward by self-seeking individuals.

North argues that this change will usually be slow for two reasons. First, the powerful actors in control of the political systems made the institutions for their benefit and so will be reluctant to change them, resulting in path dependence. Second, informal institutions—like social customs and cultural practices—are by their nature slow to change, yet play a role in determining transaction costs.

North goes on to apply this framework to analyze a few historical examples, including the Green Revolution, the American Revolution, and Imperial Spain, as well as to offer some general policy recommendations.[11c]

#### *Violence and the Rise of Open-Access Orders*

In *Violence and the Rise of Open-Access Orders*, North, Wallis, and Weingast integrate a theory of politics with a theory of economics to explain the institutions, i.e. the rules governing behavior, that develop in human societies. In their view, the primary task of any set of institutions is to limit violence among individuals. They focus on two sets of institutions—which they call social orders—that accomplish this task, but which also have different effects on economic growth.[12]

The first set of institutions are called "limited access orders," and they are characterized by elite control of the political and economic systems to extract rents. Violence is limited because the most powerful actors maintain law and order in order to protect their rents. However, their means of maintaining law and order require supporting economic and political monopolies, which stunt economic growth.

The second set of institutions that North et al. propose are called "open access orders," and they limit violence through a politically controlled military. These societies allow anyone who meets some impersonal criteria to form political and economic organizations, resulting in a Schumpeterian process of "Creative Destruction." The military limits societal violence, and the political actors that control this military are constrained by the constant competition for political and economic power that this process of creative destruction entails. Unlike limited access orders, open access orders stimulate economic growth since subsistence to economic and political challenges can come from any individual in society, rather than a select few.

North et al. argue that modern open access orders emerged from limited access orders through a two-step process: first, the application of impersonal laws to elites and the consolidation of military power, and second, the extension of elite privileges to the rest of society. They apply this theory to explain the legitimacy of elections within different societies and to explain why economic growth is more consistent in modern open access orders than it is in limited access orders.[12]

### Legacy

As a Nobel prize winner, North's reputation extended both from his own university environment to the international influences made by his research and writing. North's research in New Economic History has included such notable economists and historians as Jonathan Hughes, Richard Sutch, Lloyd Mercer, Jim Shepard, Donald Gordon, Gary Walton, Lance E. Davis, Robert Hattenbach, Roger Ransom, Gaston Rimlinger, Terry L. Anderson, P.J. Hill, Philip Coelho, and David Knowles as recorded in the 60th Anniversary dedication volume in memory of North.[13a]

### Other work

North's other major publications include:[14][15]

- Location Theory and Regional Economic Growth, *Journal of Political Economy* 63(3) 243–58, 1955.
- *The Economic Growth of the United States, 1790–1860*. Prentice-Hall, 1961.
- "The State of Economic History," *American Economic Review*, 55(1/2), pp. 86–91 (https://www.jstor.org/pss/1816246), 1965.
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- *The Rise of the Western World: A New Economic History*, 1973 (with Robert Thomas).
- *Growth and Welfare in the American Past*, Prentice-Hall, 1974.
- *Structure and Change in Economic History*, Norton, 1981.
- *Institutions and economic growth: An historical introduction*, Elsevier, 1989
- *Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England*, Cambridge University Press, 1989
- *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, 1990.
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### Further reading


- Colson, Elizabeth. *Tradition and Contract: The Problem of Order*. Chicago: Aldine Publishing, 1974.

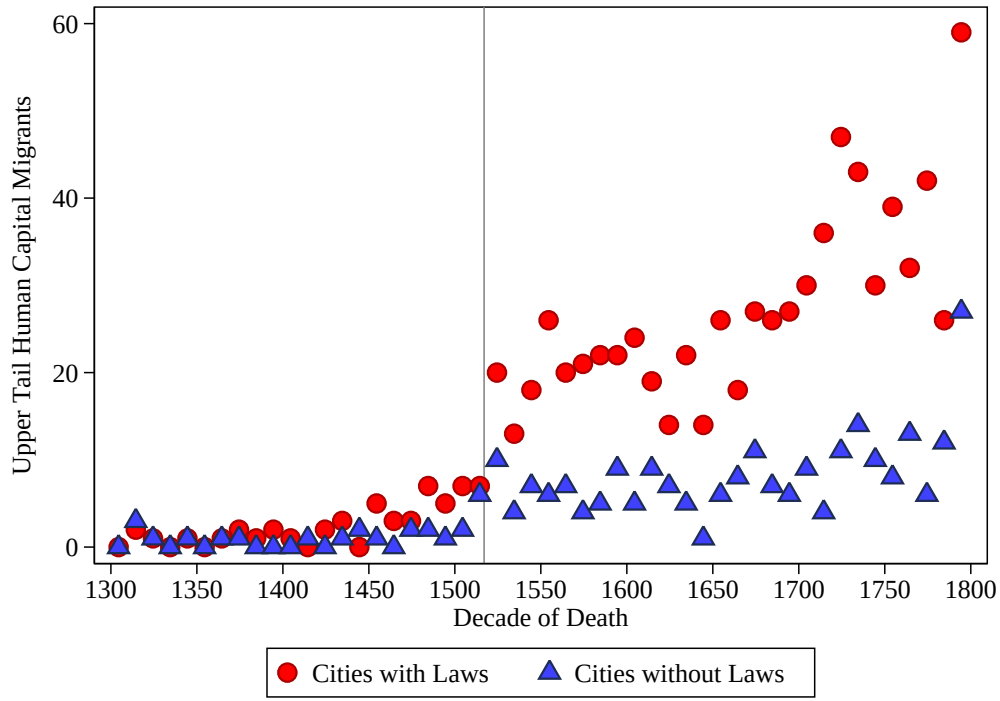

**Douglass North**

Douglass North in 1997

| | |
|---|---|
| **Born** | November 5, 1920<br>Cambridge, Massachusetts, U.S. |
| **Died** | November 23, 2015 (aged 95)<br>Benzonia, Michigan, U.S. |
| **Institution** | University of Washington<br>Rice University<br>Cambridge University<br>Washington University in St. Louis<br>Stanford University<br>Hoover Institution |
| **Field** | Economic history |
| **School or tradition** | New institutional economics |
| **Alma mater** | University of California, Berkeley |
| **Influences** | Melvin M. Knight |
| **Awards** | Nobel Memorial Prize in Economic Sciences (1993) |
| Information (https://ideas.repec.org/e/pno11.html) at IDEAS / RePEc | |

# The Reformation as Experiment - Measurement

Figure 3: The Migration of Upper Tail Human Capital




This graph plots the number of migrants observed in the *Deutsche Biographie* at the decade level in cities with and without laws. Migrants are identified as people living and dying in town $i$ but born in some other location $j$. The vertical line is at 1518, the year Luther's theses began circulating.

# Announcements

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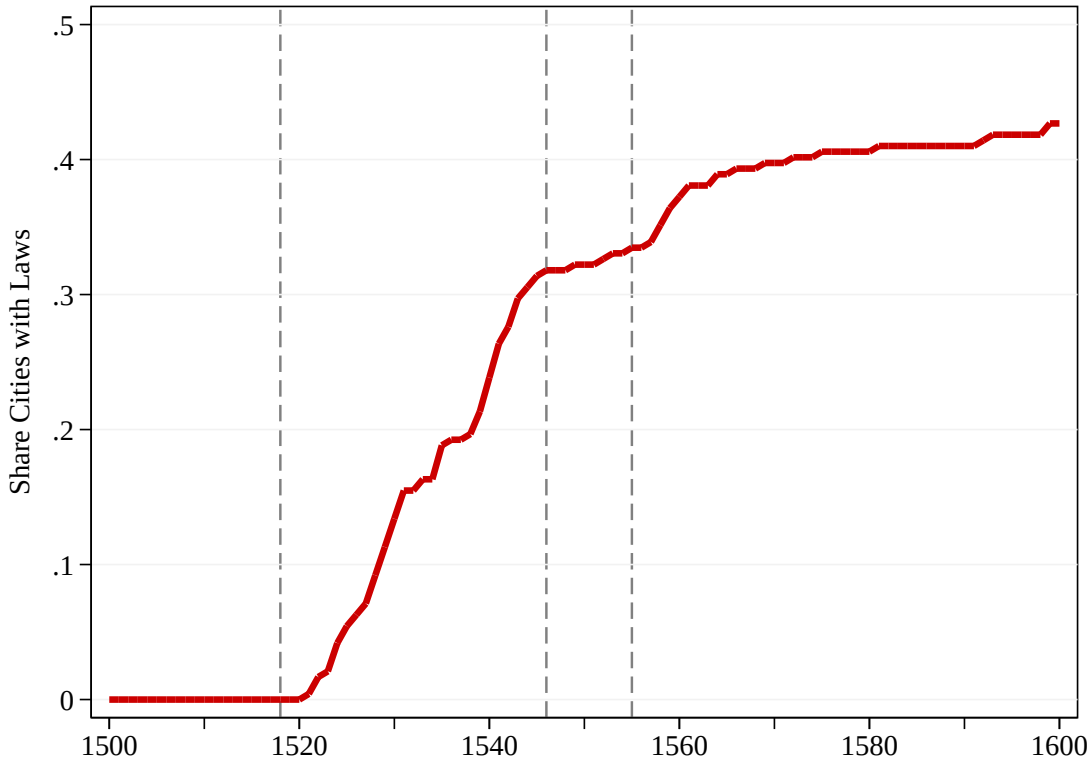
# Announcements

- Grading is underway on the response papers
- I'm hoping to have it done by Monday
- You'll get grades according to a grading rubric, I'm happy to provide additional comments in person during office hours
- Current required reading: Nunn (2008) "The Long-Term Effects of Africa's Slave Trades" *Quarterly Journal of Economics*
- Next quiz will be Wednesday, March 20th and will cover Nunn (2008) and this week's lectures
- Don't forget to be working on your projects, let me know if you have questions or if you want to borrow game sets

# The Reformation as Experiment

# The Reformation as Experiment

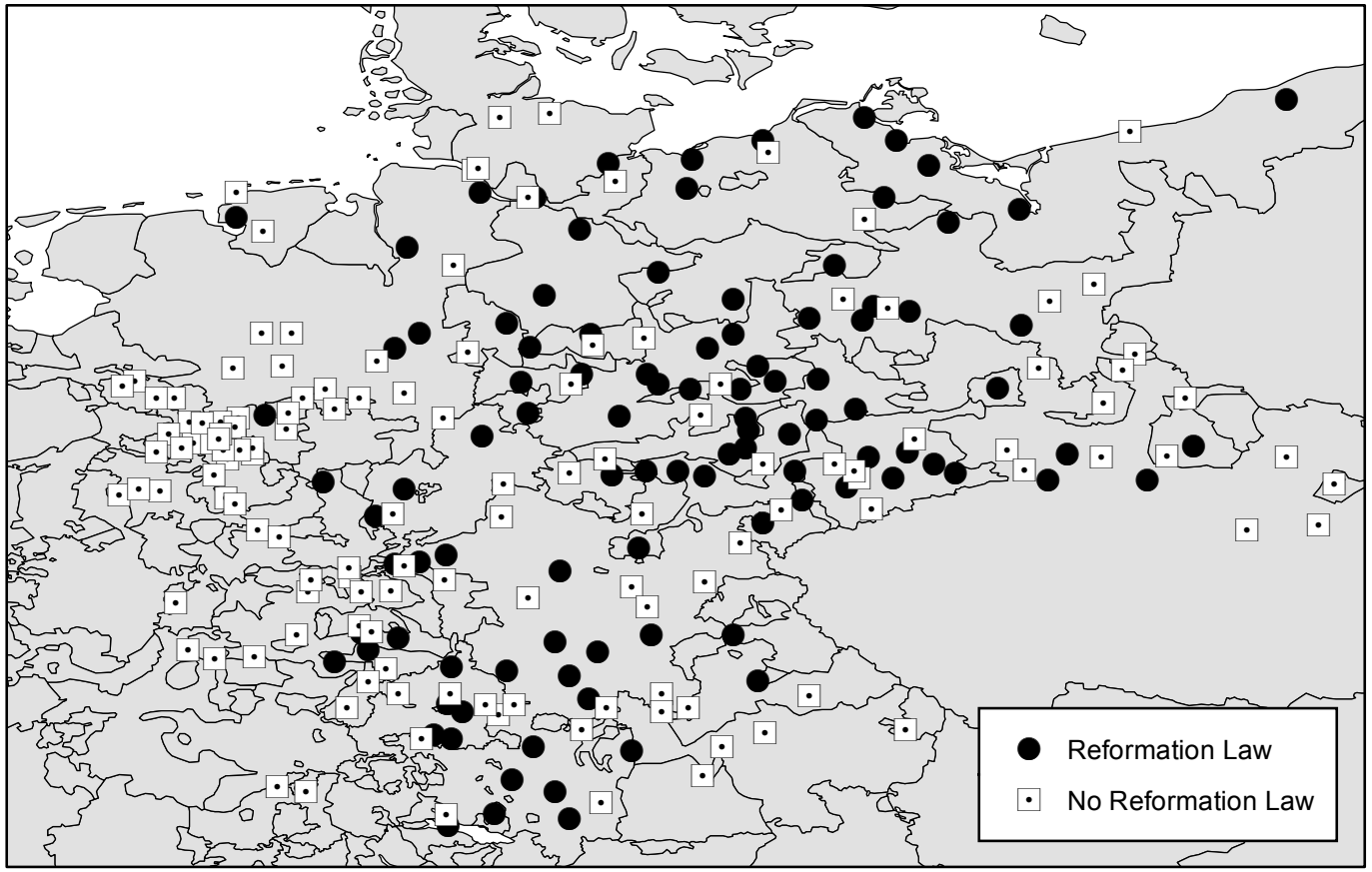
Figure 2: The Share of Cities with Reformation Laws




This graph shows the share of cities with a Reformation Law. Vertical lines mark the mass circulation of Luther's ideas in 1518, the Schmalkaldic War of 1546, and the Peace of Augsburg in 1555.

# The Reformation as Experiment - Identification

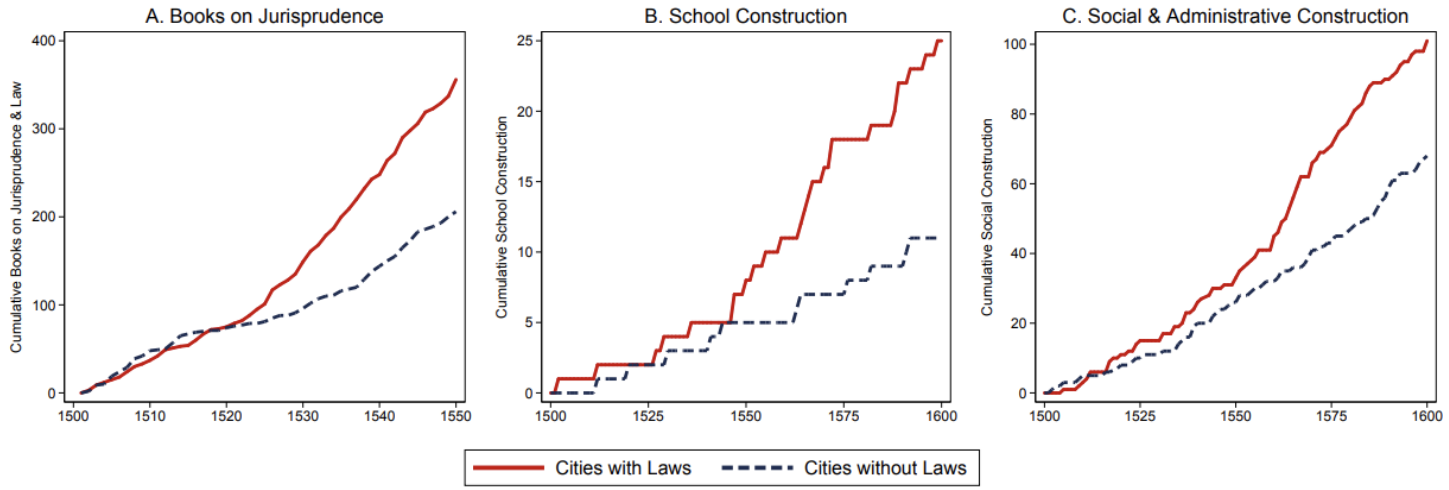
Figure 1: Cities With and Without Reformation Laws




This map shows cities with Reformation Laws (black circles) and without these laws (white squares).

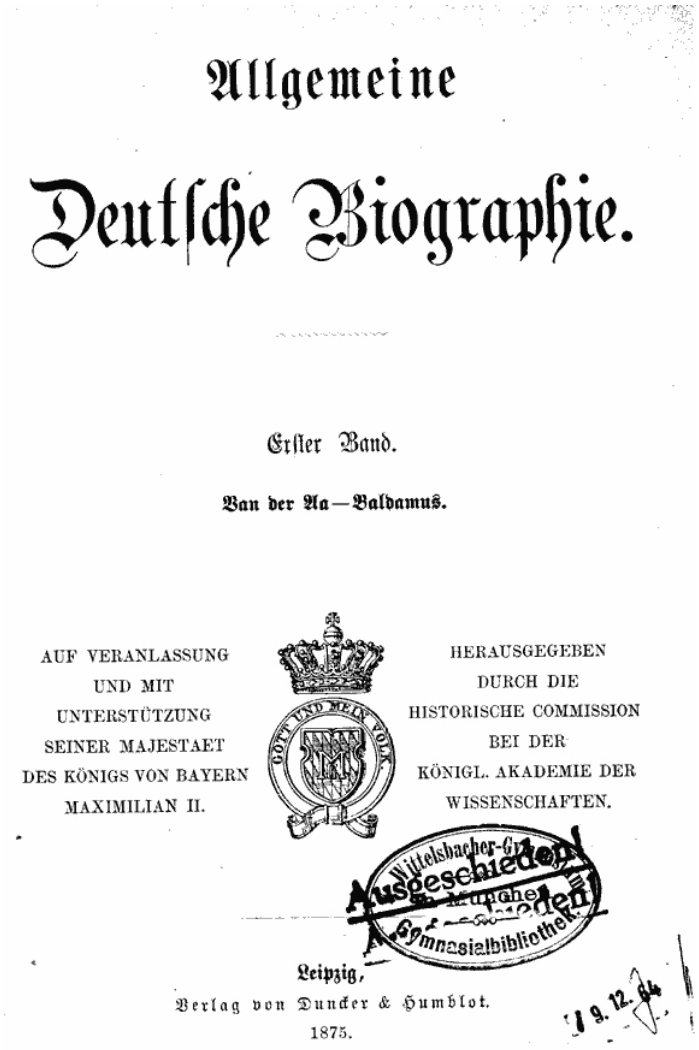
# The Reformation as Experiment

Figure 1: Jurisprudence and Construction




This graph shows the cumulative number of (A) jurisprudence publications, (B) new school construction, and (C) administrative and social welfare construction in cities that did and did not adopt public goods institutions, measured by the passage of a church ordinance (cities with and without "Laws"). Publication and construction data are from the *Universal Short Title Catalogue* and the *Deutsches Städtebuch*, respectively, for the 239 German cities we study in this paper. We classify all new school construction as "School Construction" and all construction of buildings used by city governments and in non-education social welfare and service provision as "Social & Administrative Construction".

# The Reformation as Experiment - Measurement



Allgemeine

Deutsche Biographie.

Erster Band.

Aa van der — Baldamus.

AUF VERANLASSUNG
UND MIT
UNTERSTÜTZUNG
SEINER MAJESTAET
DES KÖNIGS VON BAYERN
MAXIMILIAN II.

HERAUSGEGEBEN
DURCH DIE
HISTORISCHE COMMISSION
BEI DER
KÖNIGL. AKADEMIE DER
WISSENSCHAFTEN.



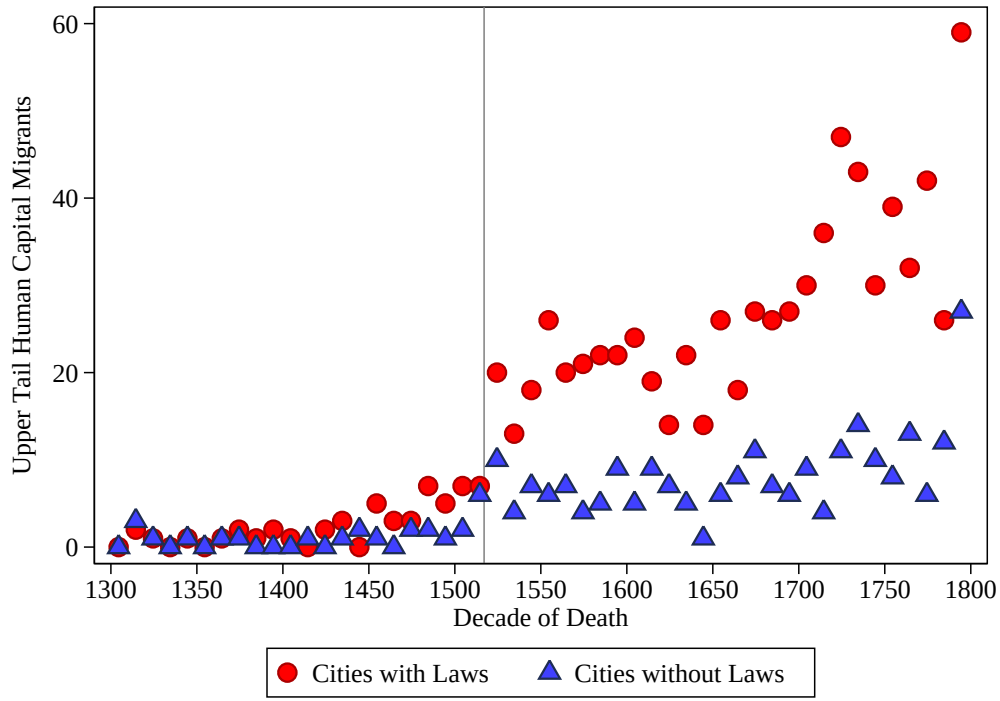
Leipzig,
Verlag von Duncker & Humblot.
1875.



Wikipedia footnotes: Douglass North - 16, Kylie Jenner - 147

# The Reformation as Experiment - Measurement

Figure 3: The Migration of Upper Tail Human Capital

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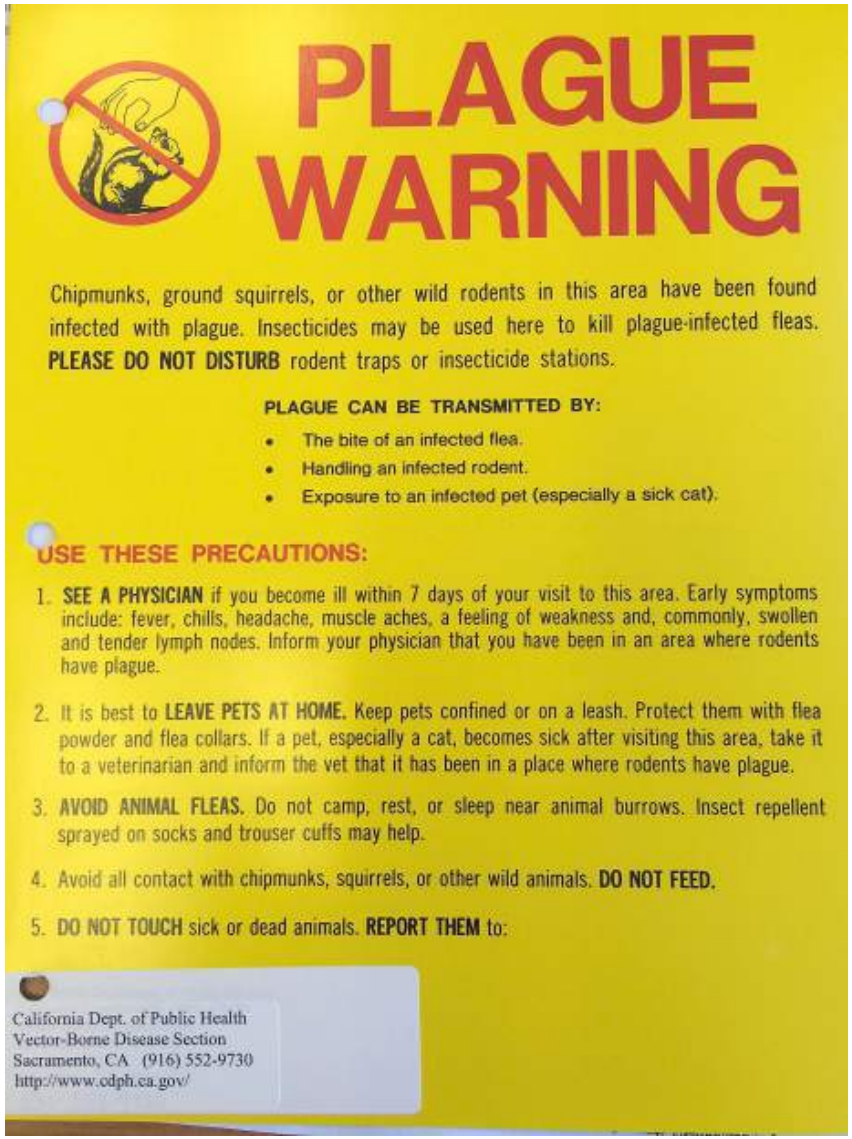
# The Reformation as Experiment - Identification

# The Reformation as Experiment - Identification



# PLAGUE WARNING

Chipmunks, ground squirrels, or other wild rodents in this area have been found infected with plague. Insecticides may be used here to kill plague-infected fleas. **PLEASE DO NOT DISTURB** rodent traps or insecticide stations.

**PLAGUE CAN BE TRANSMITTED BY:**

- The bite of an infected flea.
- Handling an infected rodent.
- Exposure to an infected pet (especially a sick cat).

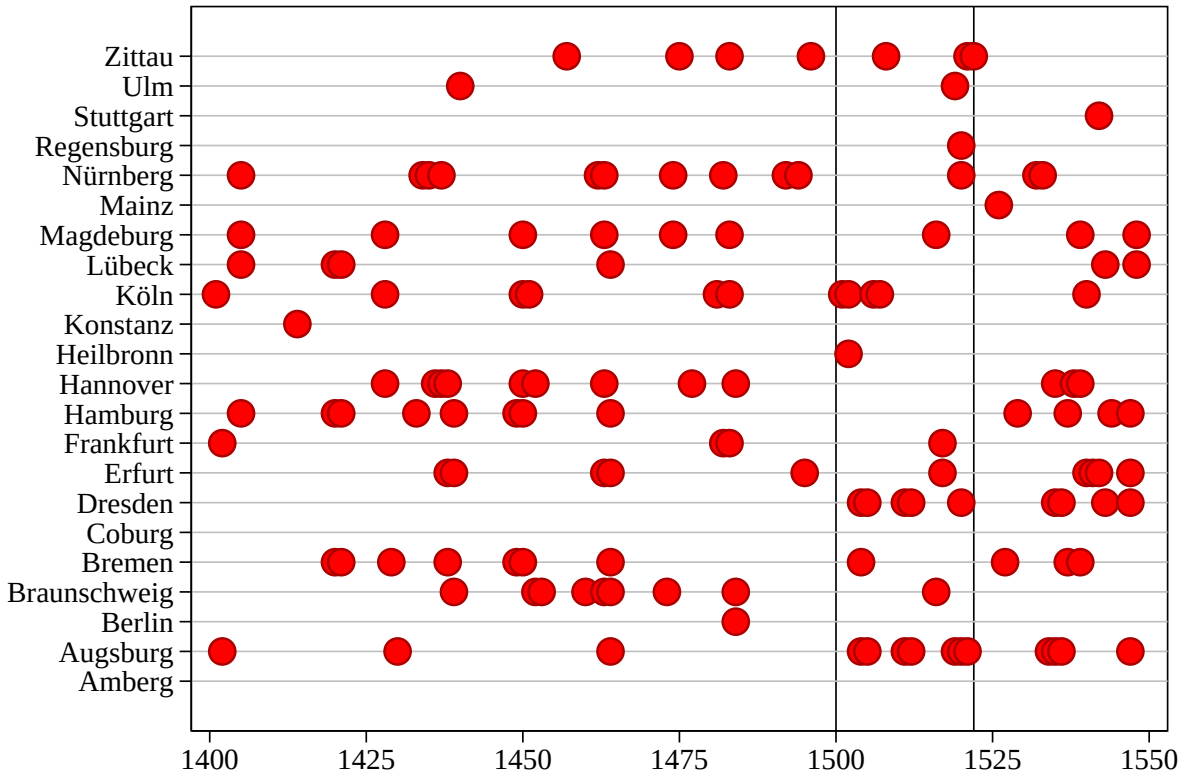
**USE THESE PRECAUTIONS:**

1. **SEE A PHYSICIAN** if you become ill within 7 days of your visit to this area. Early symptoms include: fever, chills, headache, muscle aches, a feeling of weakness and, commonly, swollen and tender lymph nodes. Inform your physician that you have been in an area where rodents have plague.
2. It is best to **LEAVE PETS AT HOME.** Keep pets confined or on a leash. Protect them with flea powder and flea collars. If a pet, especially a cat, becomes sick after visiting this area, take it to a veterinarian and inform the vet that it has been in a place where rodents have plague.
3. **AVOID ANIMAL FLEAS.** Do not camp, rest, or sleep near animal burrows. Insect repellent sprayed on socks and trouser cuffs may help.
4. Avoid all contact with chipmunks, squirrels, or other wild animals. **DO NOT FEED.**
5. **DO NOT TOUCH** sick or dead animals. **REPORT THEM** to:

California Dept. of Public Health
Vector-Borne Disease Section
Sacramento, CA (916) 552-9730
http://www.cdph.ca.gov/

# The Reformation as Experiment - Identification

Figure 5: City-Level Plague Outbreaks




This graph shows the timing of major plague outbreaks in selected cities between 1400 and 1550. Source: Biraben (1975). The vertical lines at 1500 and 1522 delimit the period used in our baseline instrumental variable analysis to construct the early 1500s plague exposure instrument.

# The Reformation as Experiment - Identification

- So why is the plague related to adopting Reformation laws?
- Dittmar and Meisenzahl are going to argue that it substantially lowered the costs of institutional change
- First, that level of devastation requires rebuilding your society, rebuilding is a good chance to do things differently
- Second, when the plague comes, those with means get out of town
- This makes it easier for those who are left to change the rules of the game in a way that is more beneficial to those that stayed (those without the means to leave)

# The Reformation as Experiment - Identification

- So let's concede for the moment that a plague outbreak is associated with institutional change
- Does that make it a good natural experiment?
- Two concerns we may still have:
  - Are the locations of plague outbreaks truly random?
  - Are there any other channels through which the plague (and a dramatic population shock) could affect economic development?
- Lots to think about here (and you should keep thinking about it) but let's move on to their results

# The Reformation as Experiment - Results

Table 6: Instrumental Variable Analysis of Long-Run Outcomes

| | [1] | [2] | [3] | [4] | [5] | [6] |
|---|---|---|---|---|---|---|
| *Panel A: First Stage – Public Goods Institutions* | | | | | | |
| | Outcome: Adoption of Law | | | | | |
| Plagues 1500-1522 | 0.14*** | 0.13*** | 0.13*** | 0.12*** | 0.12*** | 0.11*** |
| | (0.02) | (0.02) | (0.03) | (0.02) | (0.04) | (0.03) |
| $R^2$ | 0.29 | 0.30 | 0.51 | 0.52 | 0.62 | 0.63 |
| F Statistic on IV | 34.02 | 32.69 | 18.92 | 31.42 | 8.70 | 12.02 |
| *Panel B: Instrumental Variable Outcomes – Population and Human Capital* | | | | | | |
| | Outcome: Ln Population in 1800 | | | | | |
| Law | 1.61** | 1.76** | 1.94** | 2.17** | 2.13* | 2.30** |
| | (0.82) | (0.83) | (0.98) | (0.93) | (1.12) | (1.01) |
| | Outcome: Ln Upper Tail Human Capital 1750-1799 | | | | | |
| Law | 2.74** | 2.96** | 3.10** | 3.34** | 4.23** | 4.54*** |
| | (1.24) | (1.29) | (1.38) | (1.40) | (1.81) | (1.28) |
| | Outcome: Upper Tail Human Capital per 1,000 | | | | | |
| Law | 0.56** | 0.63** | 0.59* | 0.66** | 0.80** | 0.92*** |
| | (0.27) | (0.25) | (0.31) | (0.29) | (0.40) | (0.29) |
| *Controls* | | | | | | |
| Baseline Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Plagues Pre-1500: Level | Yes | Yes | Yes | Yes | Yes | Yes |
| Plagues Pre-1500: Non-Linear | No | Yes | No | Yes | No | Yes |
| Region Fixed Effect ($n$=29) | No | No | Yes | Yes | No | No |
| Principality Fixed Effect ($n$=75) | No | No | No | No | Yes | Yes |
| Observations | 239 | 239 | 239 | 239 | 234 | 234 |

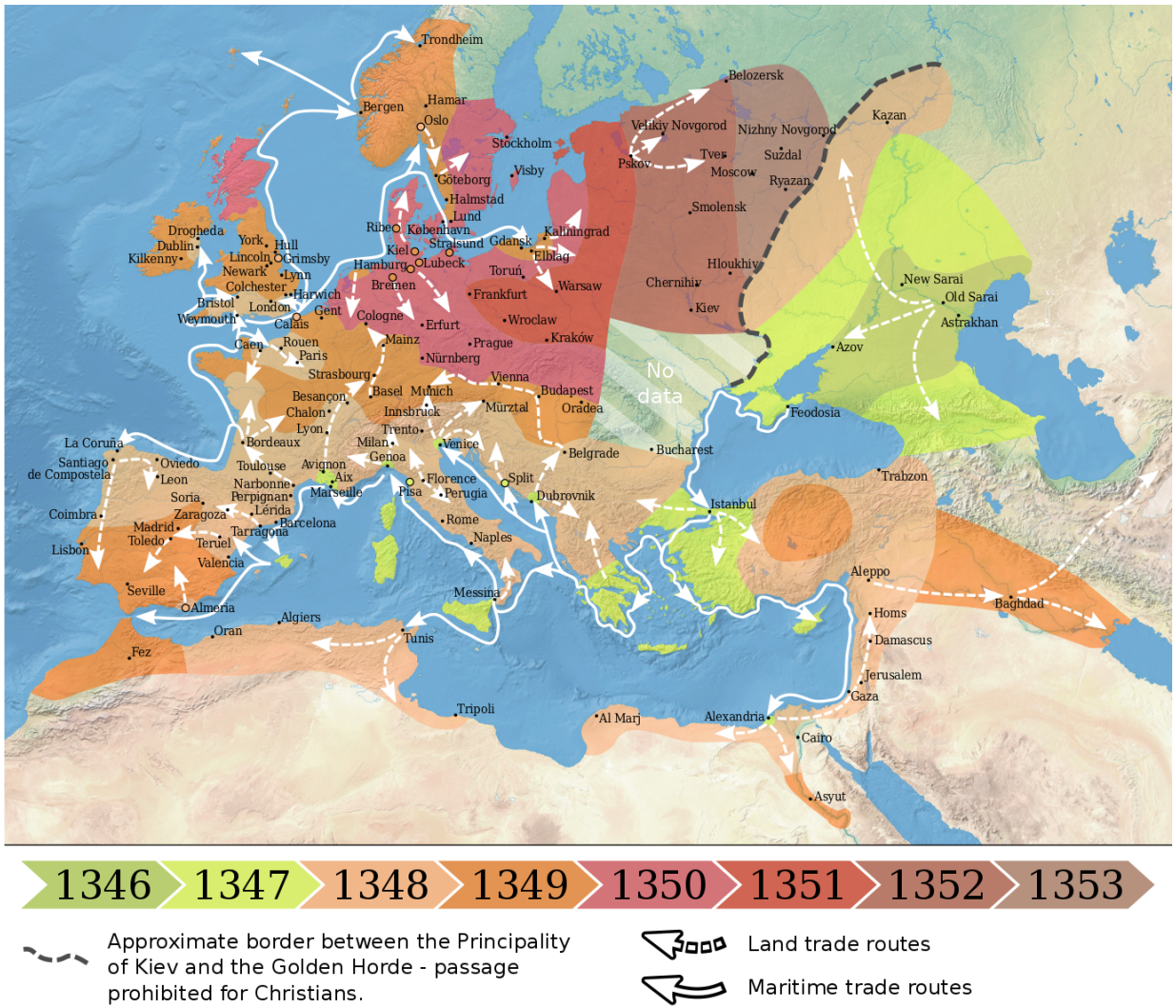
# Why Persistence?

- Dittmar and Meisenzahl provide some nice evidence of institutions mattering and mattering for the long run
- But why would these impacts persist? Why don't cities (or in Acemoglu, Johnson and Robinson's case, countries) converge?
- Acemoglu, Johnson and Robinson present three possibilities:
  - Setting up institutions that place restrictions on government power and enforce property rights is costly
  - The gains to an extractive strategy may depend on the size of the ruling elite (think back to our early lectures on efficiency)
  - If agents make irreversible investments that are complementary to a particular set of institutions, they will want them to persist

# Why Persistence?

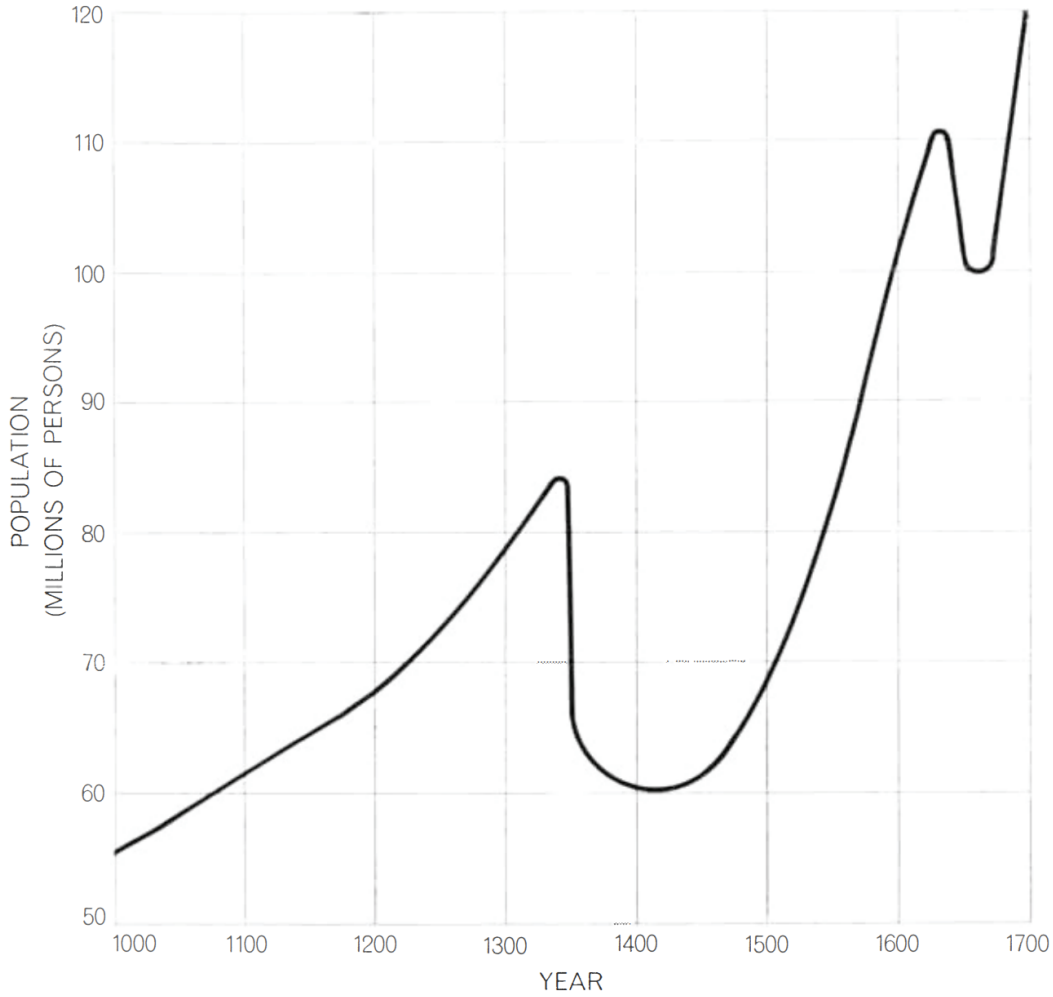
- We'll get back to some of these issues in a bit, but for now I want to add another source of persistence to the list
- People's behaviors and attitudes today are shaped in part by historical experiences
- A growing literature suggests that events and institutional arrangements in the past influence norms and preferences today
- We're going to stick with the plague in Europe to start thinking about this
- But first, let's think about the length of our own memories and the extent to which history might influence our attitudes and decisions

# Plagues and Persistence




Spread of the Black Death, 1346-1353

# Plagues and Persistence



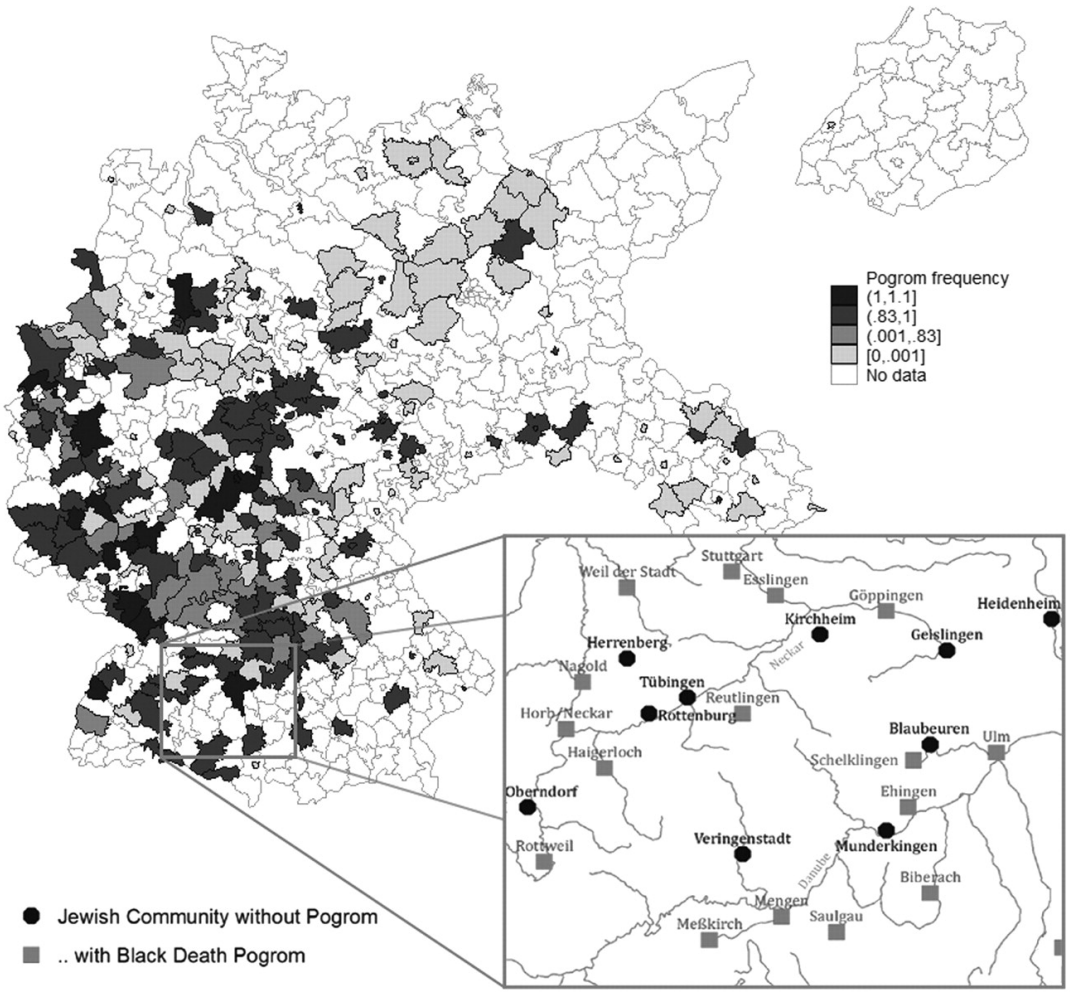

European population, 1000 to 1700. From Langer (1964) "The Black Death" *Scientific American*

# Plagues and Persistence

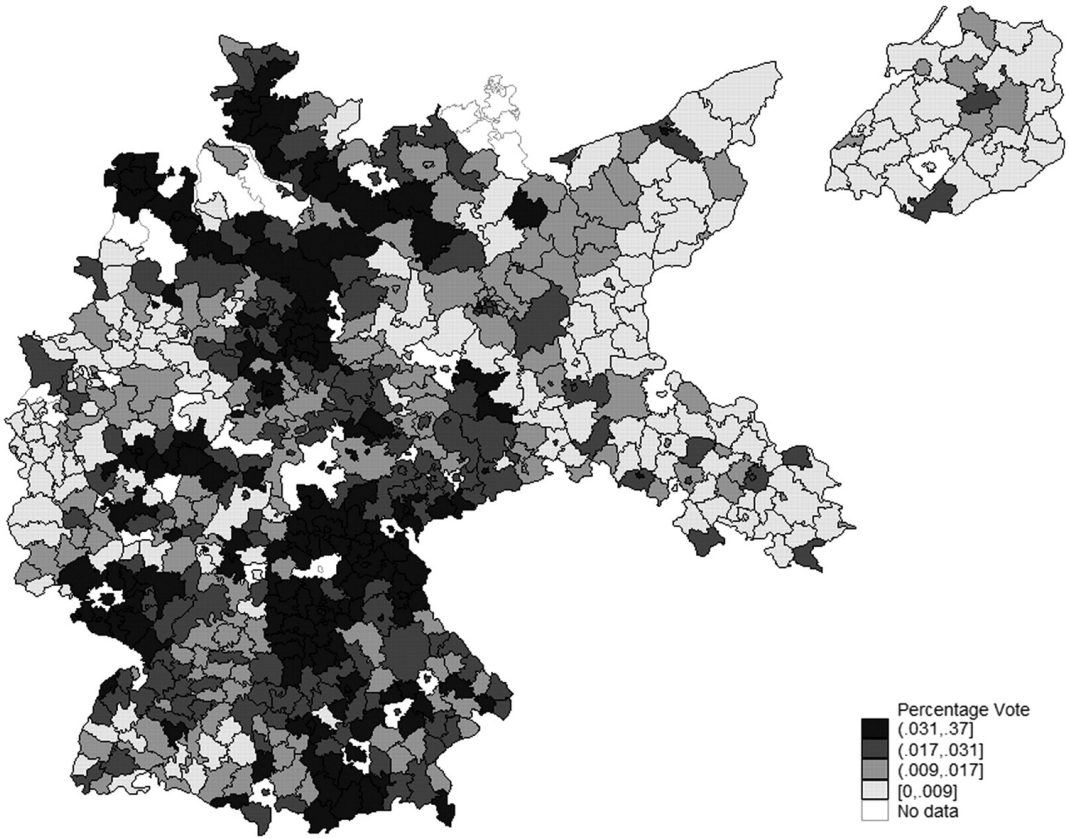
# Plagues and Persistence

- Voigtländer and Voth are going to use the Black Death to explore the persistence of cultural traits in "Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany"
- When the Black Death hit, the Jewish community was often blamed (with claims that they poisoned the town wells) leading to a large number of pogroms against the local Jewish population
- Voigtländer and Voth are going to think of these pograms driven by the plague as a somewhat random source of variation in anti-Semitism in the 1300s
- Their question is then whether this variation predicts variation in anti-Semitism in the 20th century

# Plagues and Persistence



# Plagues and Persistence




Percentage of votes for the NSDAP in the German National Election of 1928 (Voigtländer and Voth, 2012)

# Plagues and Persistence

TABLE I

DESCRIPTIVE STATISTICS FOR MAIN SAMPLE

| | Mean | Std. Dev. | Min. | Max. | Obs. |
|---|---|---|---|---|---|
| Population in 1933 | 46,118 | 115,863 | 207 | 756,605 | 325 |
| %Jewish in 1933 | 1.44 | 1.45 | 0.020 | 15.7 | 325 |
| %Protestant in 1925 | 48.4 | 34.0 | 0.97 | 97.6 | 325 |
| Synagogue in 1933 | 0.87 | 0.34 | 0 | 1 | 319 |
| Indicators for twentieth-century anti-Semitism | | | | | |
| $POG^{1920s}$ | 0.063 | 0.242 | 0 | 1 | 320 |
| $NSDAP^{1928}$ | 0.036 | 0.049 | 0.00083 | 0.313 | 325 |
| $DVFP^{1924}$ | 0.080 | 0.097 | 0 | 0.588 | 325 |
| *DEPORT* | 197.1 | 839.5 | 0 | 10,049 | 301 |
| *STÜRMER* | 3.77 | 10.7 | 0 | 110 | 325 |
| *SYNATTACK* | 0.903 | 0.297 | 0 | 1 | 278 |
| Black Death pogrom ($POG^{1349}$) | 0.723 | 0.448 | 0 | 1 | 325 |

*Notes:* Table is based on cities with medieval Jewish communities and Jewish population in 1920–30 (main sample). Appendix Table A.1 shows the equivalent statistics for the extended sample. $POG^{1920s}$ is an indicator variable for pogroms in each location during the 1920s; $NSDAP^{1928}$ is the vote share of the NSDAP in the May 1928 election; and $DVFP^{1924}$ is the vote share of the Deutsch-Völkische Freiheitspartei in the May 1924 election; *DEPORT* is the number of deportees from each locality; *STÜRMER* is the number of anti-Semitic letters to *Der Stürmer*; *SYNATTACK* takes the value 1 if a synagogue was destroyed or damaged in the 1938 *Reichskristallnacht*, and 0 otherwise. $POG^{1349}$ takes the value 1 if a pogrom occurred in the years 1348–50, and 0 otherwise.

# Plagues and Persistence

TABLE IV

CONDITIONAL AVERAGE OF TWENTIETH-CENTURY OUTCOME VARIABLES

| | Pogrom in 1349 | | | |
|---|---|---|---|---|
| | No | Yes | All towns | Obs. |
| Pogrom in 1920s (% of towns) | 1.1 | 8.2 | 6.3 | 320 |
| NSDAP May 1928 (% of valid votes) | 2.7 | 4.0 | 3.6 | 325 |
| DVFP May 1924 (% of valid votes) | 7.2 | 8.4 | 8.0 | 325 |
| Deportations (per 100 Jews in 1933) | 24.2 | 35.6 | 34.0 | 278 |
| *Stürmer* letters (per 10,000 inhabitants) | 0.59 | 0.86 | 0.82 | 325 |
| Synagogue attack (% of towns) | 79.1 | 93.8 | 90.3 | 278 |

*Notes:* All statistics based on the main sample, including only towns with documented medieval Jewish settlement. Of the 325 towns and cities, 235 (72%) had pogroms in 1348–50. The mean of deportations per 100 Jews and *Stürmer* letters is weighted by city population in 1933. The mean of synagogue attacks is calculated only for towns with synagogues or prayer rooms in 1933.

# Announcements

- Still hoping to have response papers graded by Monday
- Current required reading: Nunn (2008) "The Long-Term Effects of Africa's Slave Trades" *Quarterly Journal of Economics*
- Next quiz will be Wednesday, March 20th and will cover Nunn (2008) and this week's lectures (plus what we wrap up on Monday)
- Don't forget to work on your projects, let me know if you have questions or if you want to borrow game sets
- Monday office hours are cancelled, I'll be giving a guest lecture in INRL 300

# Persistence of Bad Institutions

- So Voigtländer and Voth find persistence of anti-Semitism over a remarkably long time
- Arguably random shocks to anti-Semitism in 1350 predict variation in anti-Semitism at the time of WWII
- Why is this important for our class?
- Voigtländer and Voth point to the existing economics literature showing that these issues of trust and bias influence important economic outcomes

# Persistence of Bad Institutions

- One example includes Guiso, Sapienza and Zingales (2016) showing that inherited trust predicts economic performance
- Another example is Alesina and La Ferrara (2005) showing that cultural and religious fragmentation is correlated with civil wars, corruption, and public good provision
- Let's take a very, very quick look at what Alesina and La Ferrara are doing
- They are focusing on something called the *fractionalization index*

# Persistence of Bad Institutions

$$ELF = 1 - \sum_i s_i^2$$

- $ELF$ is the ethno-linguistic fractionalization index
- $s_i$ is the share of group $i$ out of the total population
- So if everyone is a member of the same group, $ELF$ equals 0
- As you get more groups (meaning smaller $s_i$'s), $ELF$ will increase approaching the limit of one

# Persistence of Bad Institutions

| Freshmen | Sophomores | Juniors | Seniors | Fractionalization |
|---|---|---|---|---|
| 0 | 0 | 0 | 200 | 0 |
| 0 | 0 | 100 | 100 | 0.5 |
| 50 | 50 | 50 | 50 | 0.75 |
| 10 | 10 | 10 | 170 | 0.27 |
| 1 | 1 | 99 | 99 | 0.5099 |

# Persistence of Bad Institutions

TABLE 1
FRACTIONALIZATION AND LONG-RUN GROWTH
(DEPENDENT VARIABLE IS GROWTH OF PER CAPITA GDP)

| Variable | ETHNIC 1 | ETHNIC 2 | LANGUAGE 3 | LANGUAGE 4 |
|---|---|---|---|---|
| Dummy for the 1960s | 0.059 | 0.153 | 0.065 | 0.156 |
| | (3.357) | (5.144) | (3.563) | (5.248) |
| Dummy for the 1970s | 0.057 | 0.158 | 0.062 | 0.161 |
| | (3.093) | (5.222) | (3.280) | (5.333) |
| Dummy for the 1980s | 0.036 | 0.141 | 0.042 | 0.145 |
| | (1.940) | (4.601) | (2.213) | (4.725) |
| Dummy for Sub-Saharian Africa | -0.008 | -0.016 | -0.009 | -0.014 |
| | (-1.630) | (2.853) | (-2.026) | (-2.595) |
| Dummy for Latin America and the Caribbean | -0.016 | -0.011 | -0.019 | -0.018 |
| | (-4.458) | (-2.923) | (-5.252) | (-4.201) |
| Log of initial income | -0.004 | -0.018 | -0.004 | -0.018 |
| | (-1.499) | (-3.767) | (-1.660) | (-3.724) |
| Log of schooling | 0.012 | 0.005 | 0.011 | 0.008 |
| | (2.767) | (1.092) | (2.627) | (1.669) |
| Assassinations | | -21.342 | | -13.988 |
| | | (2.212) | | (-1.010) |
| Financial Depth | | 0.012 | | 0.010 |
| | | (1.798) | | (1.652) |
| Black Market premium | | -0.021 | | -0.022 |
| | | (4.738) | | (-4.953) |
| Fiscal Surplus/GDP | | (0.128) | | 0.132 |
| | | 3.369 | | (3.474) |
| Log of telephones per worker | | | | |
| | | (0.006) | | 0.004 |
| | | 2.078 | | (1.488) |
| **Fractionalization** | **-0.020** | **-0.014** | **-0.019** | **-0.021** |
| | **(-3.005)** | **(-1.795)** | **(-2.979)** | **(-2.881)** |
| No of Observations | 82; 88; 94 | 40; 69; 66 | 82; 86; 92 | 39; 68; 65 |
| R-squared | .23; .17; .35 | .32; .43; 54 | .21; .21; .30 | .36; .47; .52 |

(t-statistics in parentheses)
Estimated using Seemingly Unrelated Regressions: a separate regression for each ten year period.

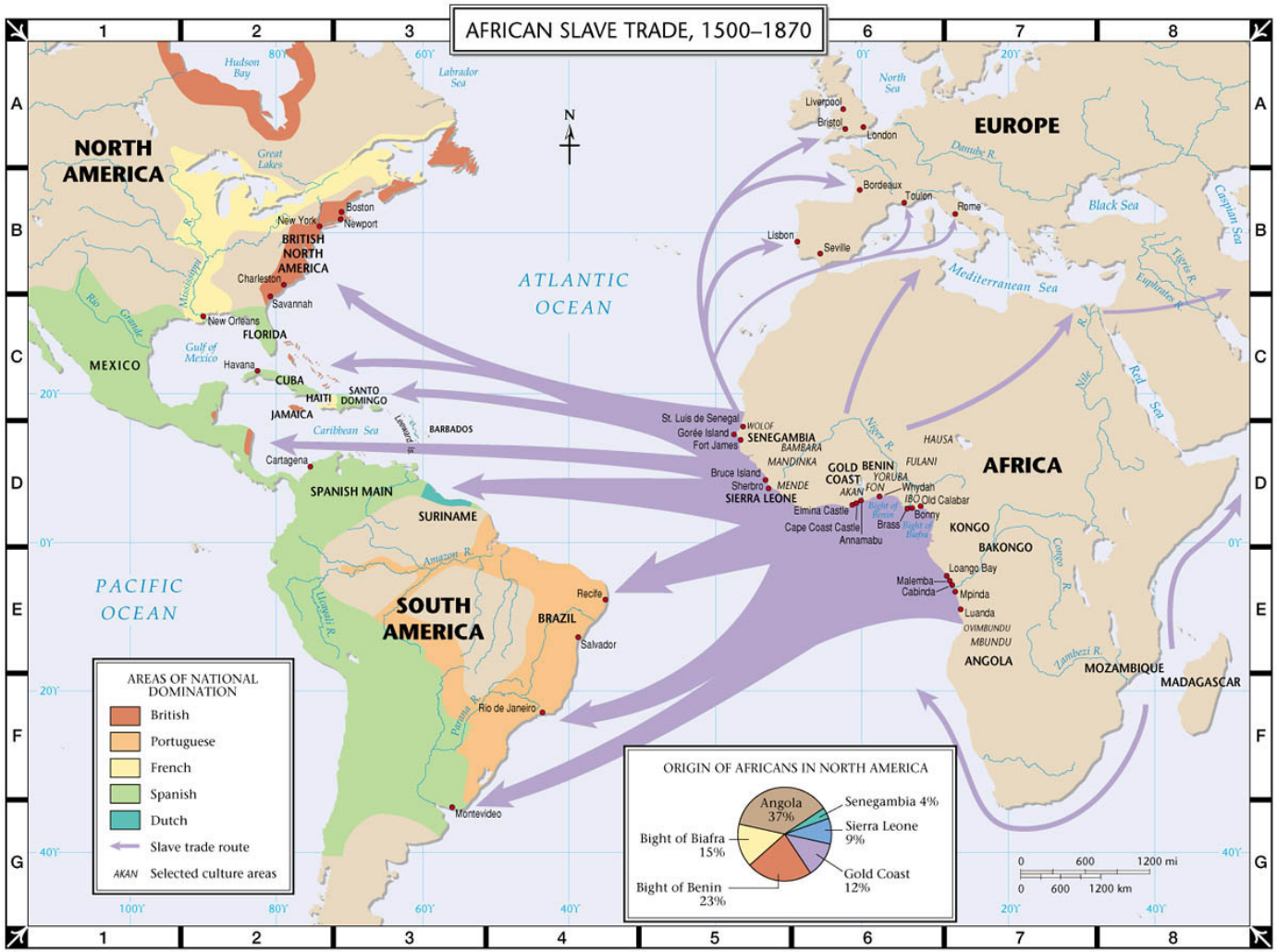
# Persistence of Bad Institutions

- This work by Voigtländer and Voth as well as the work of Alesina and La Ferrara leads us to Nunn's work on the slave trade
- These papers taken together are going to give us a way to think about the persistence of the extractive institutions from the colonial period at the heart of the Acemoglu, Johnson and Robinson article
- In short, the horrific institution of slavery is going to have effects long after the abolition of slavery through these channels of fractionalization and distrust

# Overview of the Slave Trade

- Slave trade lasted from roughly 1400 to 1900
- Colonial rule in Africa lasted between 1885 to 1960
- Four different slave trades:
  - Trans-Atlantic: slaves taken from West Africa, West-Central Africa and Eastern Africa to European colonies in the New World
  - Trans-Saharan: slaves taken from south of the Saharan desert to Northern Africa
  - Red Sea: slaves taken from inland Africa and shipped to Middle East and India
  - Indian Ocean: slaves taken from Eastern Africa and shipped to Middle East, India and plantation islands in the Indian Ocean

# Overview of the Slave Trade



# Overview of the Slave Trade

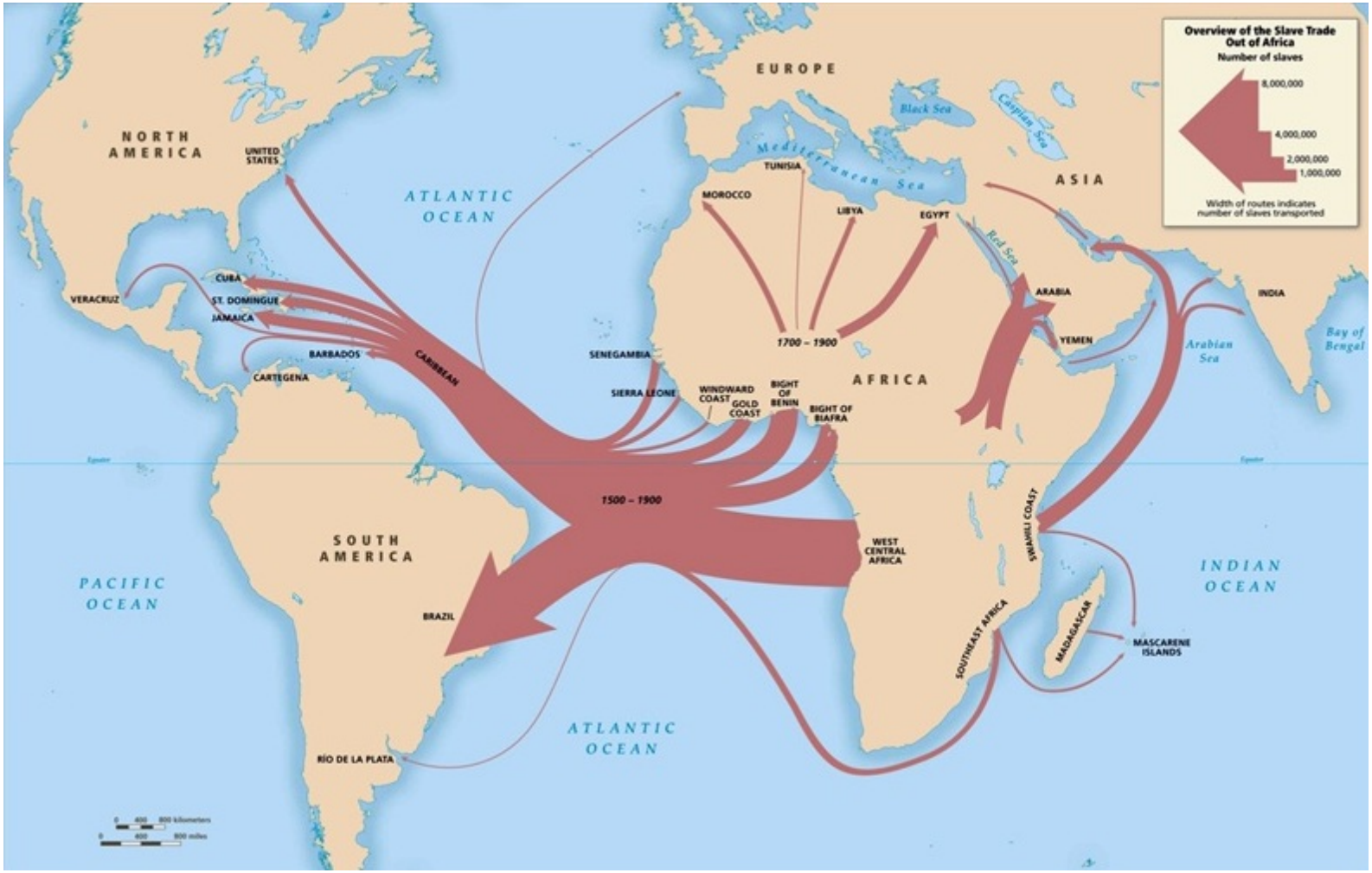
- Over 18 million slaves were exported (12 million were through trans-Atlantic trade)
- Estimated that by 1850, Africa's population was half of what it would have been without the slave trade
- Slave trade led to social and ethnic fragmentation, political instability, weakening of states, corruption of judicial institutions at the time it was taking place
- Nunn is going to look at the persistent effects of these problems

# Countries Exporting the Most Slaves, 1400-1900

ESTIMATED TOTAL SLAVE EXPORTS BETWEEN 1400 AND 1900 BY COUNTRY

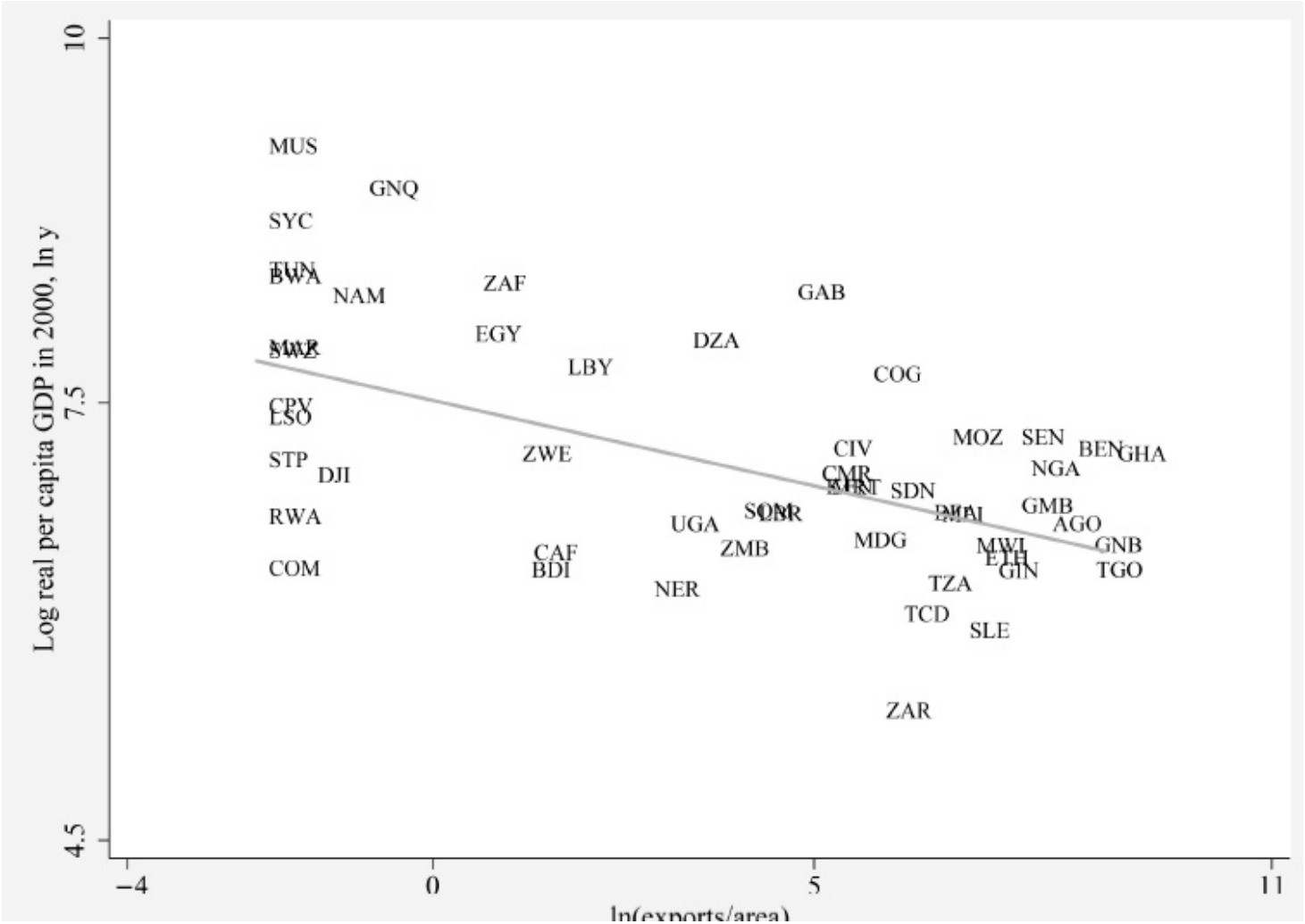
| Isocode | Country name | Trans-Atlantic | Indian Ocean | Trans-Saharan | Red Sea | All slave trades |
|---|---|---|---|---|---|---|
| AGO | Angola | 3,607,020 | 0 | 0 | 0 | 3,607,020 |
| NGA | Nigeria | 1,406,728 | 0 | 555,796 | 59,337 | 2,021,859 |
| GHA | Ghana | 1,614,793 | 0 | 0 | 0 | 1,614,793 |
| ETH | Ethiopia | 0 | 200 | 813,899 | 633,357 | 1,447,455 |
| SDN | Sudan | 615 | 174 | 408,261 | 454,913 | 863,962 |
| MLI | Mali | 331,748 | 0 | 509,950 | 0 | 841,697 |
| ZAR | Democratic Republic of Congo | 759,468 | 7,047 | 0 | 0 | 766,515 |
| MOZ | Mozambique | 382,378 | 243,484 | 0 | 0 | 625,862 |
| TZA | Tanzania | 10,834 | 523,992 | 0 | 0 | 534,826 |
| TCD | Chad | 823 | 0 | 409,368 | 118,673 | 528,862 |

# Countries Exporting the Most Slaves, 1400-1900

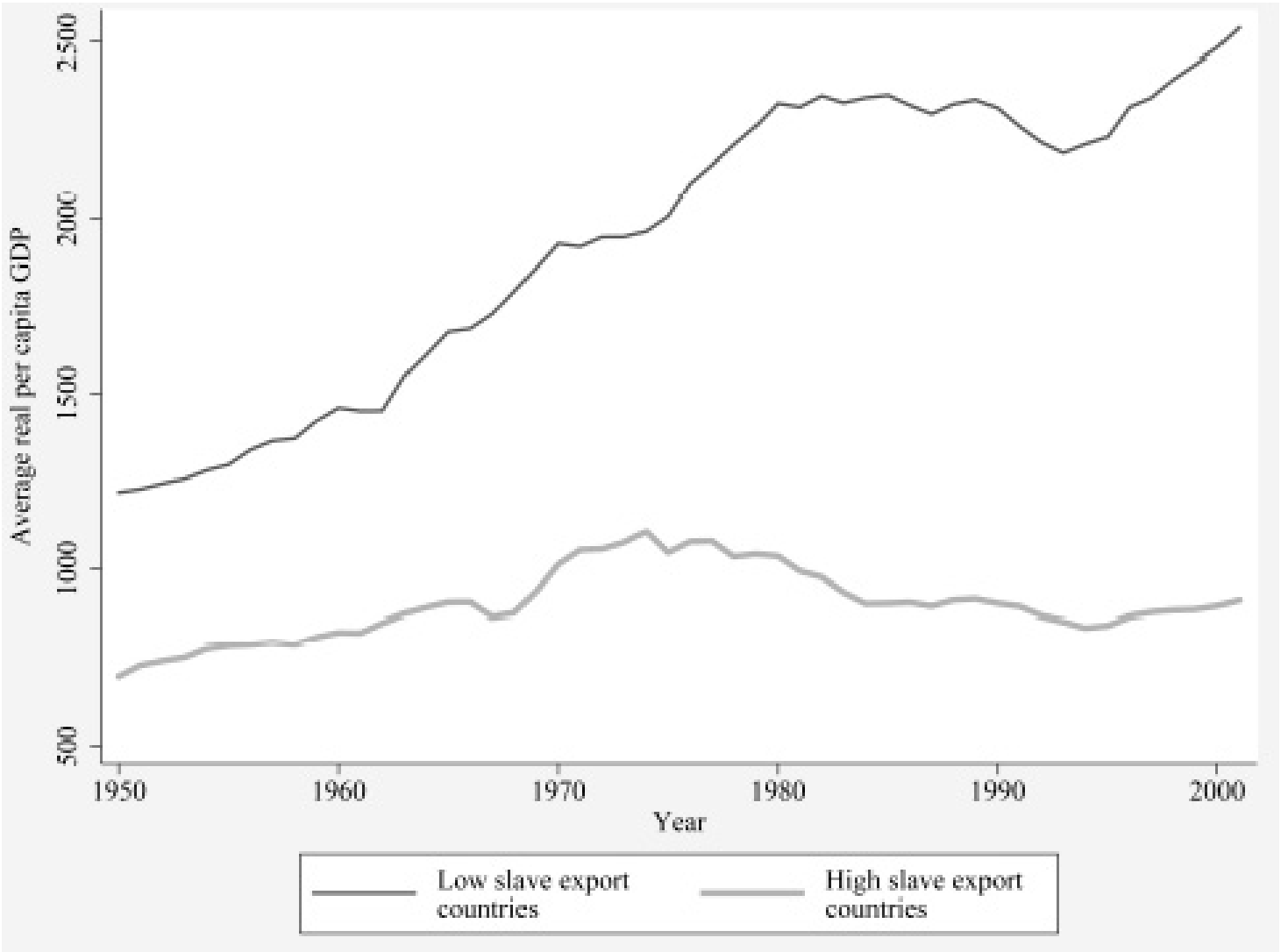


# Countries Exporting the Most Slaves, 1400-1900

# Slaves Exports and Modern GDP per Capita



# Economic Growth for Countries with the Lowest and Highest Slave Exports



# Economic Growth and the Slave Trade: Identification

- So the empirical evidence is pretty convincing that greater involvement in the slave trade is associated with worse modern economic performance
- But is this a causal relationship?
- Why were some countries more involved in the slave trade?
- Could it be these underlying differences that drive the relationship, not the slave trade itself?

# Economic Growth and the Slave Trade: Identification

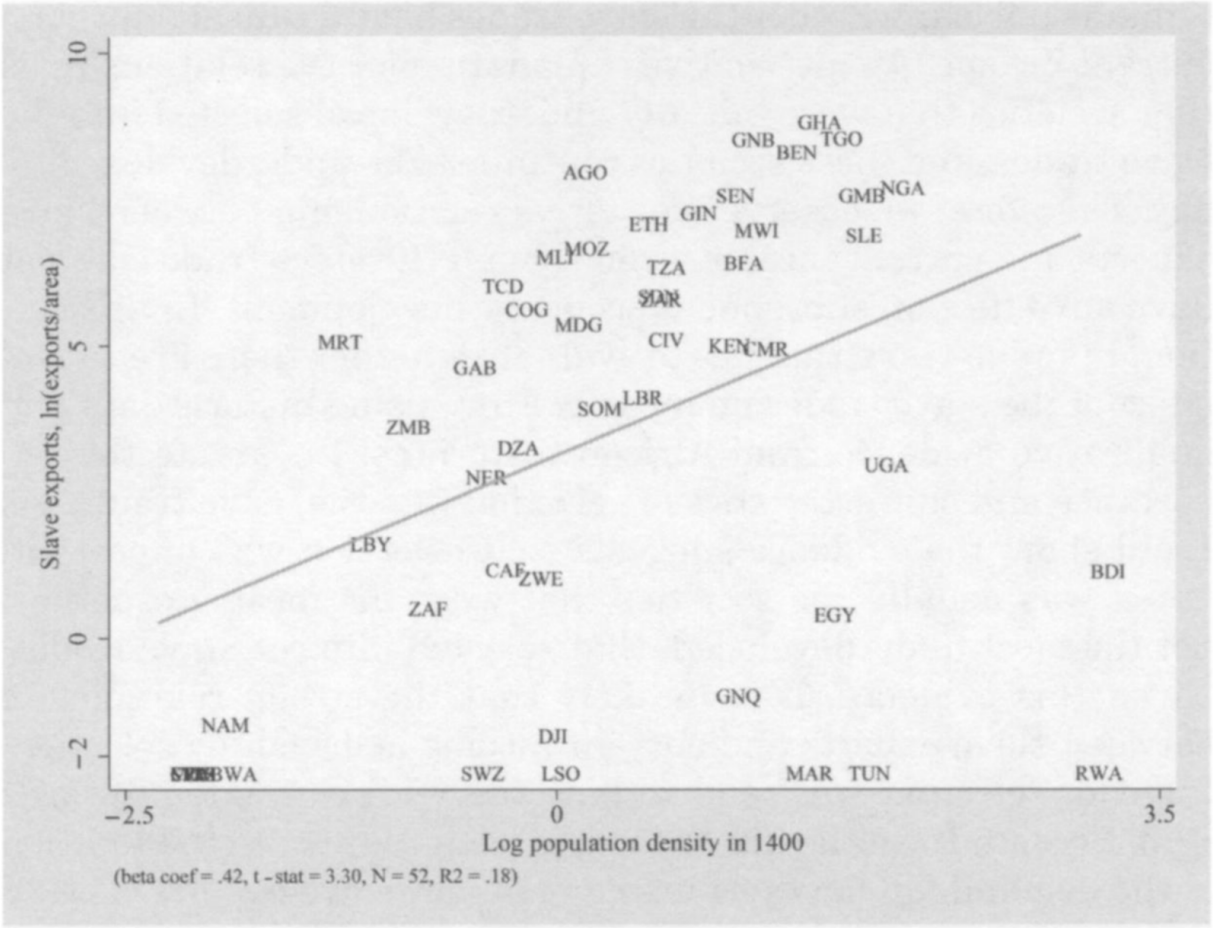



**FIGURE IV**
**Relationship between Initial Population Density and Slave Exports**

# Economic Growth and the Slave Trade: Identification


**FIGURE V**
**Example Showing the Distance Instruments for Burkina Faso**

# Economic Growth and the Slave Trade: Identification

TABLE IV

ESTIMATES OF THE RELATIONSHIP BETWEEN SLAVE EXPORTS AND INCOME

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Second Stage. Dependent variable is log income in 2000, ln $y$ | | | | |
| ln(exports/area) | −0.208*** | −0.201*** | −0.286* | −0.248*** |
| | (0.053) | (0.047) | (0.153) | (0.071) |
| | [−0.51, −0.14] | [−0.42, −0.13] | [−∞, +∞] | [−0.62, −0.12] |
| Colonizer fixed effects | No | Yes | Yes | Yes |
| Geography controls | No | No | Yes | Yes |
| Restricted sample | No | No | No | Yes |
| $F$-stat | 15.4 | 4.32 | 1.73 | 2.17 |
| Number of obs. | 52 | 52 | 52 | 42 |
| First Stage. Dependent variable is slave exports, ln(exports/area) | | | | |
| Atlantic distance | −1.31*** | −1.74*** | −1.32* | −1.69** |
| | (0.357) | (0.425) | (0.761) | (0.680) |
| Indian distance | −1.10*** | −1.43*** | −1.08 | −1.57* |
| | (0.380) | (0.531) | (0.697) | (0.801) |
| Saharan distance | −2.43*** | −3.00*** | −1.14 | −4.08** |
| | (0.823) | (1.05) | (1.59) | (1.55) |
| Red Sea distance | −0.002 | −0.152 | −1.22 | 2.13 |
| | (0.710) | (0.813) | (1.82) | (2.40) |
| $F$-stat | 4.55 | 2.38 | 1.82 | 4.01 |
| Colonizer fixed effects | No | Yes | Yes | Yes |
| Geography controls | No | No | Yes | Yes |
| Restricted sample | No | No | No | Yes |
| Hausman test ($p$-value) | .02 | .01 | .02 | .04 |
| Sargan test ($p$-value) | .18 | .30 | .65 | .51 |

# Announcements

- Response papers are nearly all graded, the rest will be graded today
- Note that the grades are out of 20 points based on depth of engagement with the essay prompt (40%), depth of engagement with the COLL 300 class and event (40%), and structure of the writing (20%)
- Use the rubric scores to see where you can improve, feel free to come to office hours for more detailed feedback
- Grading will be similar for the other two response papers

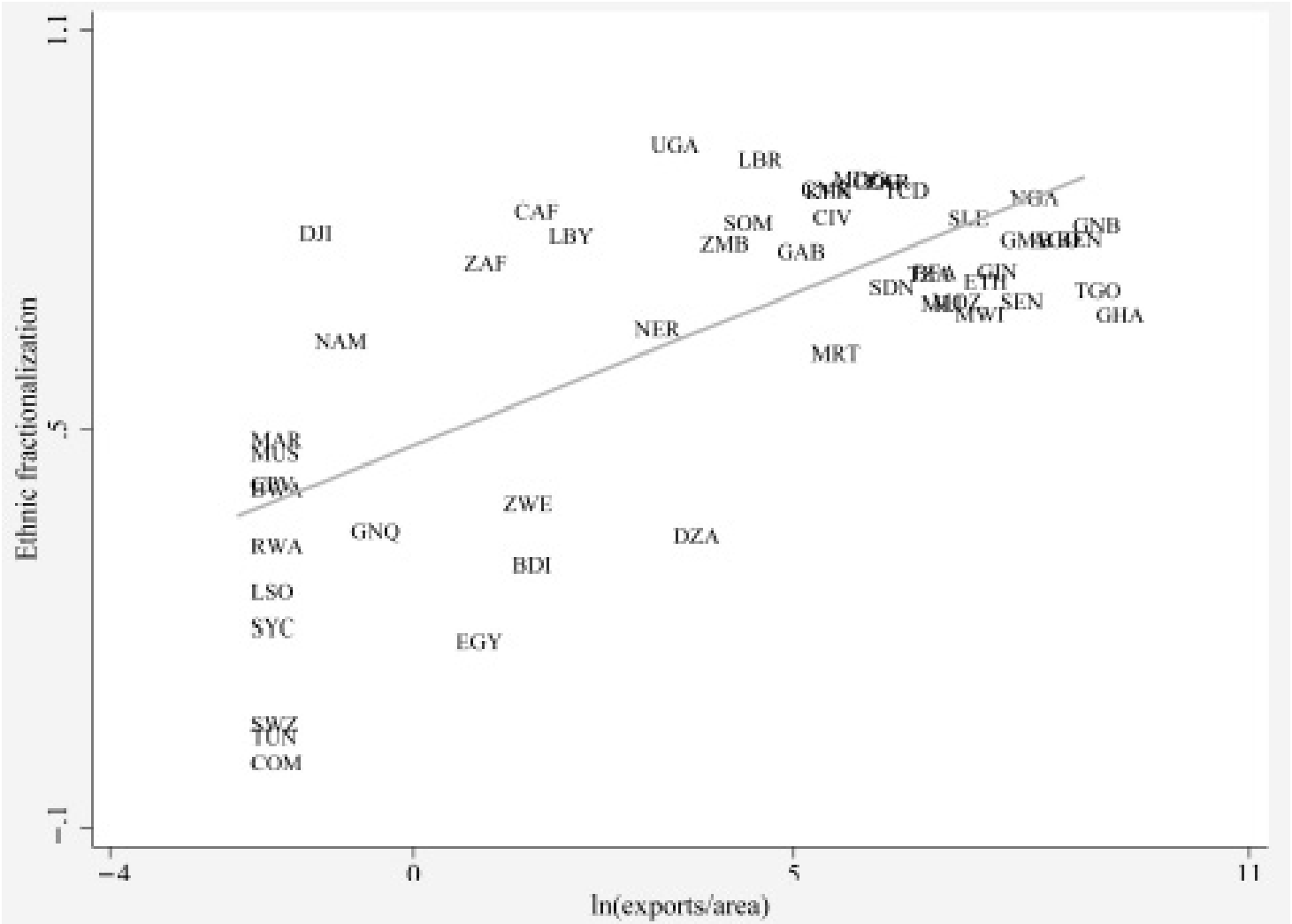
# Announcements

- Current required reading: Nunn (2008) "The Long-Term Effects of Africa's Slave Trades" *Quarterly Journal of Economics*
- Next quiz will be Wednesday, March 20th and will cover Nunn (2008), last week's lectures and today's lecture
- Don't forget to work on your projects, let me know if you have questions or if you want to borrow game sets
- Today's office hours are cancelled, I'll be giving a guest lecture in INRL 300

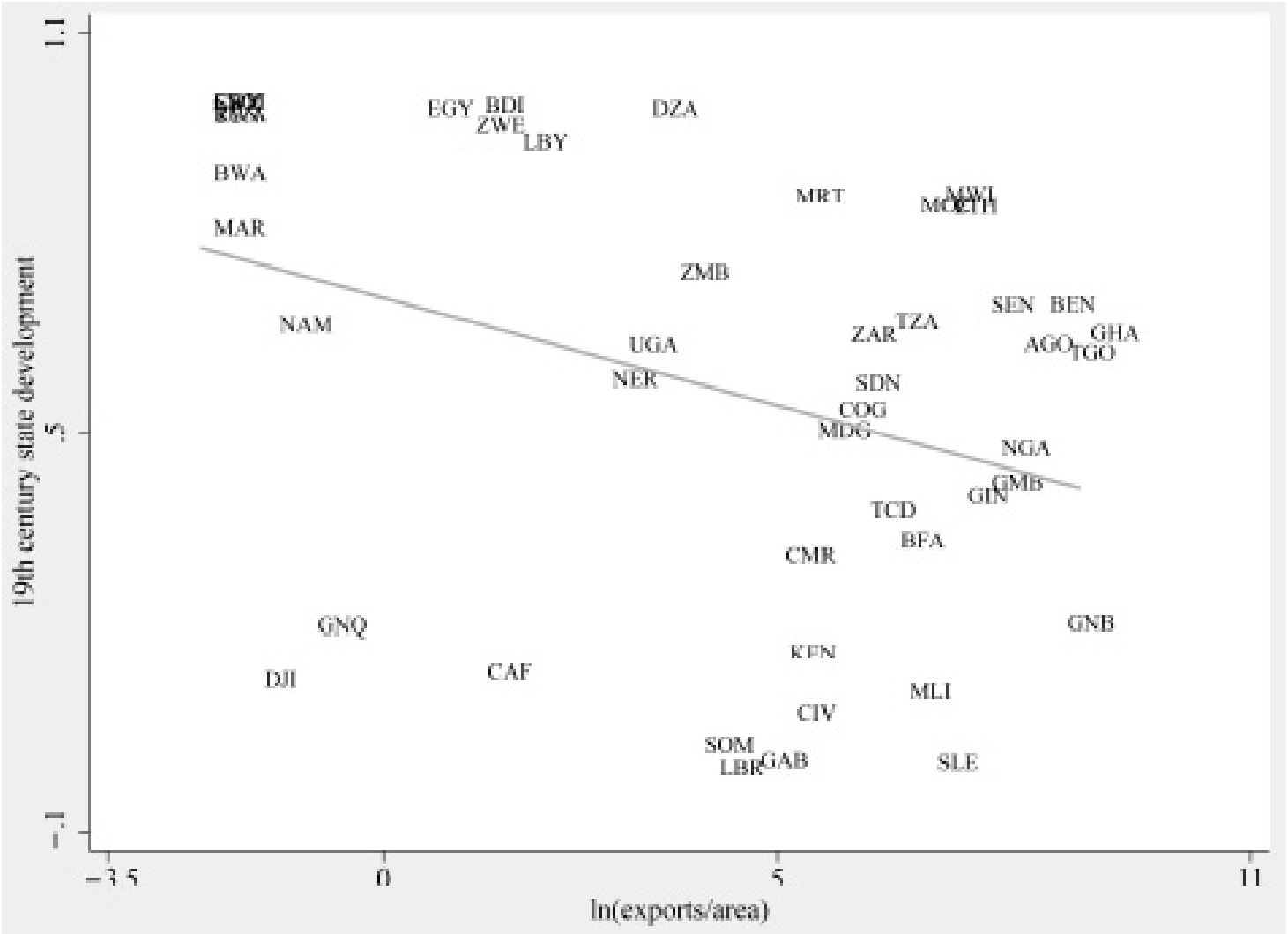
# The Long Term Effects of Bad Institutions

- Clearly some areas of Africa were far more affected by slavery than others
- Today, those areas that exported the most slaves are less economically developed and Nunn provides some convincing evidence that this is due to slavery, not country characteristics that determined the extent of slavery
- So why is this a persistence of bad institutions story?
- Nunn's answer is that the slave trade had profound impacts on several features of institutional development:
  - Ethnic fractionalization
  - State development
  - Levels of distrust

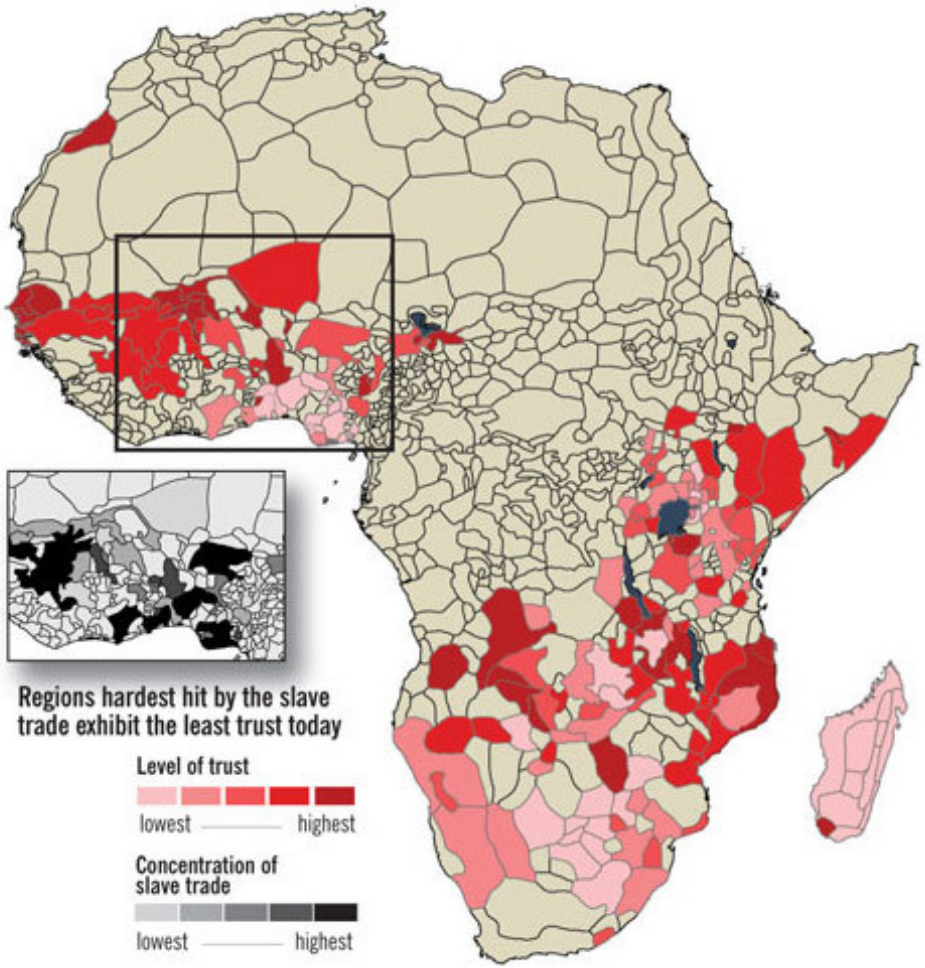
# Slave Exports and Modern Ethnic Fractionalization



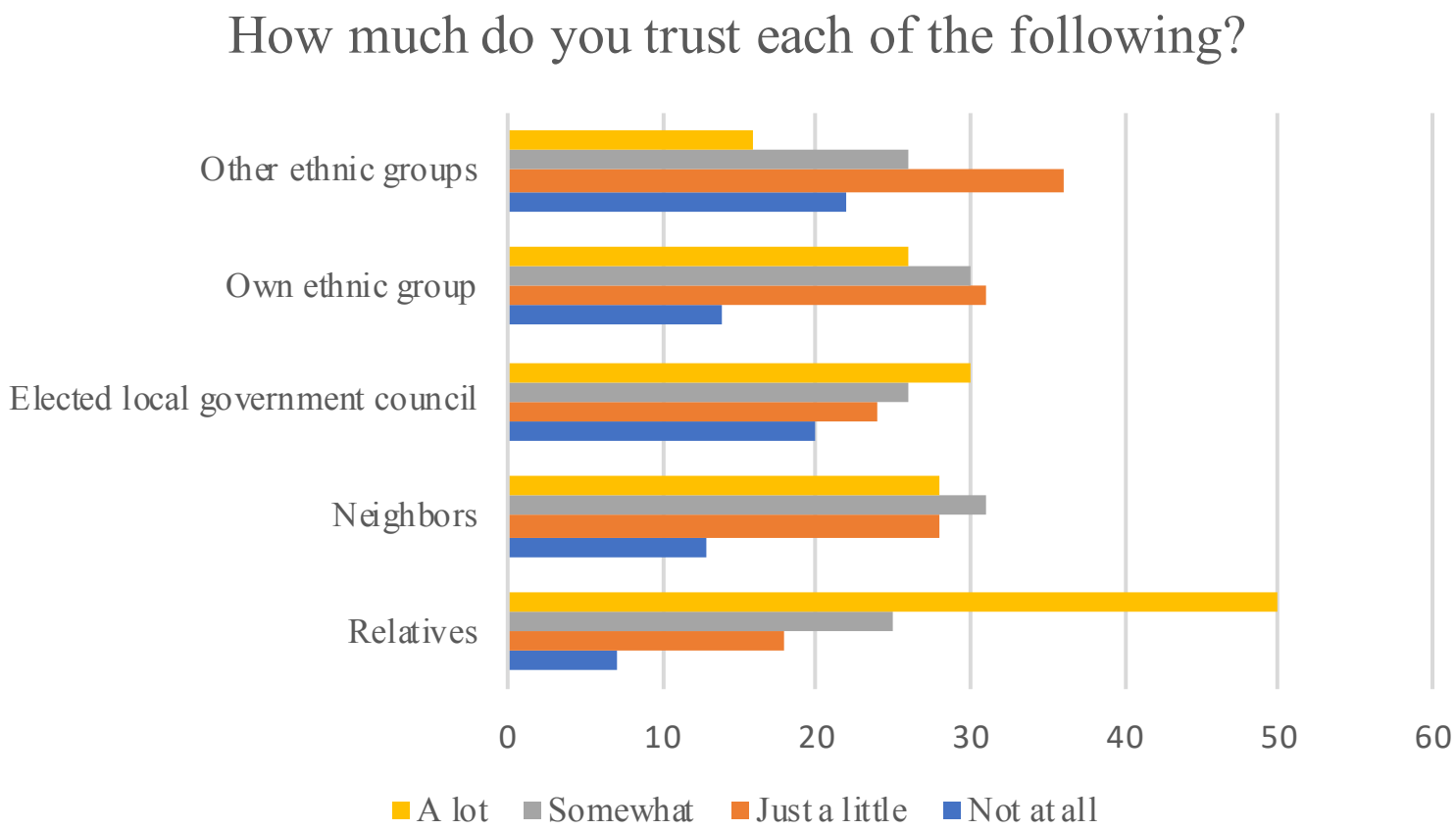
# Slave Exports and 19th Century State Development



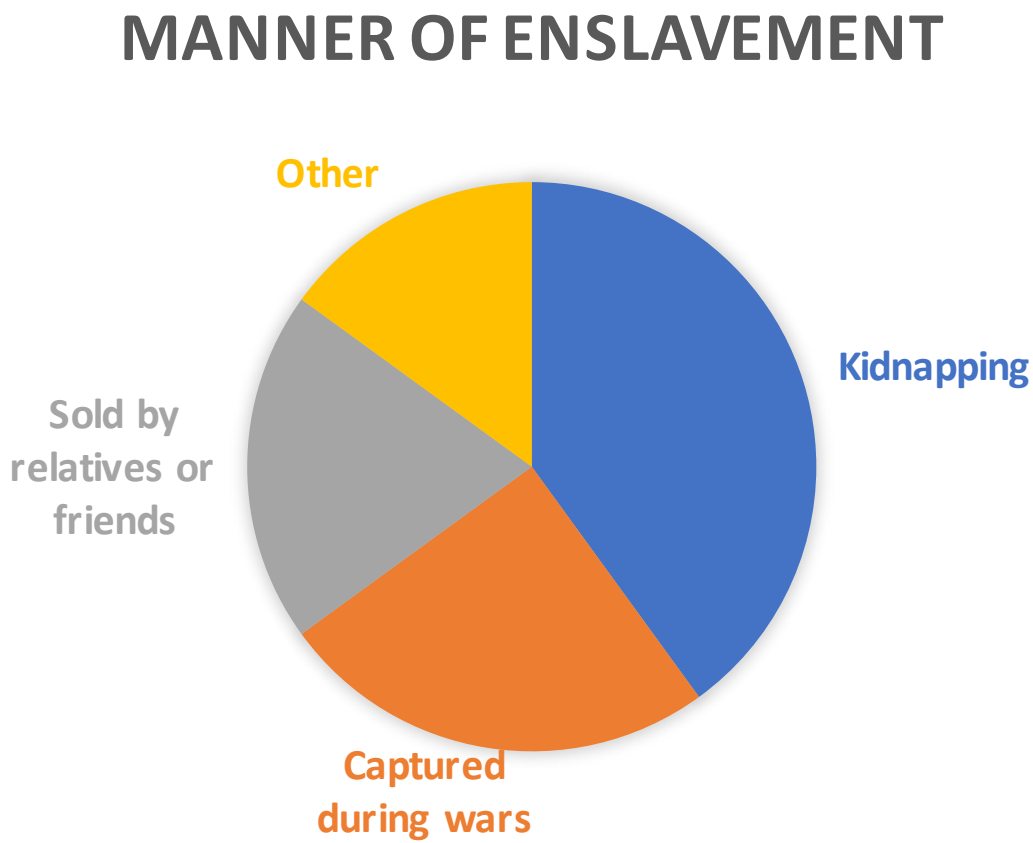
# Slave Exports and Modern Distrust



# Slave Exports and Modern Distrust



# Slave Exports and Modern Distrust




*Based on interviews in the 1840s of former slaves living in Freetown, Sierra Leone by Sigismund Koelle*

# Slave Exports and Modern Distrust

TABLE 2—OLS ESTIMATES OF THE DETERMINANTS OF THE TRUST OF OTHERS

| | Trust of relatives (1) | Trust of neighbors (2) | Trust of local council (3) | Intra-group trust (4) | Inter-group trust (5) |
|---|---|---|---|---|---|
| ln (1 + exports/area) | −0.133*** | −0.159*** | −0.111*** | −0.144*** | −0.097*** |
| | (0.037) | (0.034) | (0.021) | (0.032) | (0.028) |
| Individual controls | Yes | Yes | Yes | Yes | Yes |
| District controls | Yes | Yes | Yes | Yes | Yes |
| Country fixed effects | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 20,062 | 20,027 | 19,733 | 19,952 | 19,765 |
| Number of ethnicity clusters | 185 | 185 | 185 | 185 | 185 |
| Number of district clusters | 1,257 | 1,257 | 1,283 | 1,257 | 1,255 |
| $R^2$ | 0.13 | 0.16 | 0.20 | 0.14 | 0.11 |

*Notes:* The table reports OLS estimates. The unit of observation is an individual. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. The individual controls are for age, age squared, a gender indicator variable, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, and an indicator for whether the respondent lives in an urban location. The district controls include ethnic fractionalization in the district and the share of the district's population that is the same ethnicity as the respondent.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

# Slave Exports and Modern Distrust

TABLE 3—OLS ESTIMATES OF THE DETERMINANTS OF THE TRUST OF OTHERS, WITH ADDITIONAL CONTROLS

| | Trust of relatives (1) | Trust of neighbors (2) | Trust of local council (3) | Intragroup trust (4) | Intergroup trust (5) |
|---|---|---|---|---|---|
| ln (1 + exports/area) | −0.178*** | −0.202*** | −0.129*** | −0.188*** | −0.115*** |
| | (0.032) | (0.031) | (0.022) | (0.033) | (0.030) |
| Colonial population density | Yes | Yes | Yes | Yes | Yes |
| Ethnicity-level colonial controls | Yes | Yes | Yes | Yes | Yes |
| Individual controls | Yes | Yes | Yes | Yes | Yes |
| District controls | Yes | Yes | Yes | Yes | Yes |
| Country fixed effects | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 16,709 | 16,679 | 15,905 | 16,636 | 16,473 |
| Number of ethnicity clusters | 147 | 147 | 146 | 147 | 147 |
| Number of district clusters | 1,187 | 1,187 | 1,194 | 1,186 | 1,184 |
| $R^2$ | 0.13 | 0.16 | 0.21 | 0.16 | 0.12 |

*Notes:* The table reports OLS estimates. The unit of observation is an individual. Standard errors are adjusted for two-way clustering at the ethnicity and district levels. The individual controls are for age, age squared, a gender indicator variable, five living conditions fixed effects, ten education fixed effects, 18 religion fixed effects, 25 occupation fixed effects, and an indicator for whether the respondent lives in an urban location. The district controls include ethnic fractionalization in the district and the share of the district's population that is the same ethnicity as the respondent. Ethnicity-level colonial controls include the prevalence of malaria, a 1400 urbanization indicator variable, eight fixed effects for the sophistication of precolonial settlement, the number of jurisdictional political hierarchies beyond the local community in the precolonial period, an indicator for integration with the colonial rail network, an indicator for contact with precolonial European explorers, and the number of missions per square kilometer

# Slave Exports and Modern Distrust

TABLE 10—IDENTIFYING CHANNELS OF CAUSALITY

| | Trust of relatives (1) | Trust of neighbors (2) | Trust of local council (3) | Intragroup trust (4) | Intergroup trust (5) |
|---|---|---|---|---|---|
| Ethnicity-based slave export measure (baseline measure) | −0.155*** (0.029) | −0.182*** (0.029) | −0.100*** (0.023) | −0.169*** (0.033) | −0.090*** (0.030) |
| Location-based slave export measure | −0.045*** (0.014) | −0.045*** (0.016) | −0.045** (0.018) | −0.043** (0.018) | −0.047** (0.020) |
| Colonial population density | Yes | Yes | Yes | Yes | Yes |
| Ethnicity-level colonial controls | Yes | Yes | Yes | Yes | Yes |
| Baseline controls | Yes | Yes | Yes | Yes | Yes |
| Country fixed effects | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 15,999 | 15,972 | 15,221 | 15,931 | 15,773 |
| Number of clusters | 146/269 | 146/269 | 145/272 | 146/269 | 146/269 |
| $R^2$ | 0.13 | 0.16 | 0.20 | 0.16 | 0.12 |

*Notes:* The table reports OLS estimates. The unit of observation is an individual. Standard errors are adjusted for two-way clustering at the ethnicity-based ethnicity level and at the location-based ethnicity level. "Ethnicity-based slave export measure" is our baseline measure of slave exports used throughout the article; it is the log of the number of slaves taken from an individual's ethnic group (normalized by land area). "Location-based slave export measure" is our alternative measure of slave exports, which is the log of the number of slaves taken from the location where an individual is currently living (normalized by land area). See Table 3 for a description of the baseline controls, the ethnicity-level colonial controls, and the colonial population density variables.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

# Slave Exports and Modern Distrust

TABLE 7—REDUCED FORM RELATIONSHIP BETWEEN THE DISTANCE FROM THE COAST AND TRUST WITHIN AFRICA AND ASIA

| | Trust of local government council | | | |
|---|---|---|---|---|
| | Afrobarometer sample | | Asiabarometer sample | |
| | (1) | (2) | (3) | (4) |
| Distance from the coast | 0.00039*** | 0.00031*** | −0.00001 | 0.00001 |
| | (0.00009) | (0.00008) | (0.00010) | (0.00009) |
| Country fixed effects | Yes | Yes | Yes | Yes |
| Individual controls | No | Yes | No | Yes |
| Number of observations | 19,913 | 19,913 | 5,409 | 5,409 |
| Number of clusters | 185 | 185 | 62 | 62 |
| $R^2$ | 0.16 | 0.18 | 0.19 | 0.22 |

*Notes:* The table reports OLS estimates. The unit of observation is an individual. The dependent variable in the Asiabarometer sample is the respondent's answer to the question: "How much do you trust your local government?" The categories for the answers are the same in the Asiabarometer as in the Afrobarometer. Standard errors are clustered at the ethnicity level in the Afrobarometer regressions and at the location (city) level in the Asiabarometer and the WVS samples. The individual controls are for age, age squared, a gender indicator, education fixed effects, and religion fixed effects.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

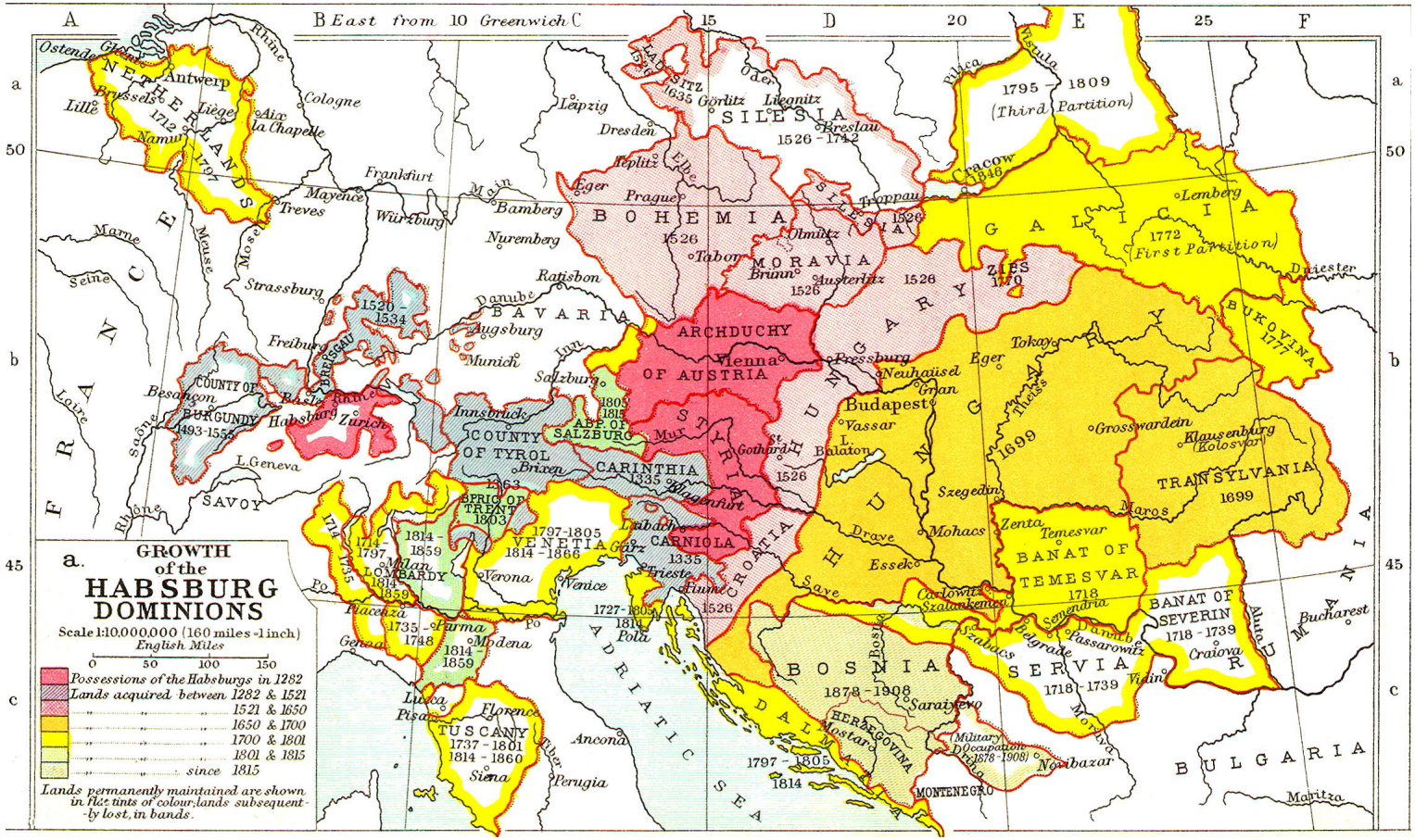
# Past Institutions and Persistence

- This persistence of mistrust is an important part of explaining modern economic performance
- We saw similar persistence of tensions with Voigtländer and Voth's work on Germany
- Is it only tensions and divisions that persist? Can positive characteristics persist as well?
- Let's return to Europe and a paper by Becker, Boeckh, Hainz and Woessman
- We're going to look at "The Empire is Dead, Long Live the Empire! Long-run Persistence of Trust and Corruption in the Bureaucracy"

# Past Institutions and Persistence


Rudolf IV of Hapsburg, 1358-1365

# Past Institutions and Persistence



# Past Institutions and Persistence

- Becker et al. are going to look at the persistent impacts of the Habsburg Empire
- Unlike the historical events we have looked at so far, the Habsburg Empire has a variety of good institutions associated with it
- The Habsburg Empire is the prototype of a Vielvölkerstaat, a state composed of many people
- It largely respected the identity and local differences of various parts of the empire
- The bureaucracy of the empire was well respected because of its reliability

# Announcements


zweyen General Tafeln/vnd in der newen Tafel die allein Europam begreifft. Doch wann man ansehen will vnd darzu rechnen die grossen Landschafften die gegen Mitnacht gehn/solt wol die breite Europe vbertreffen die länge. Wie aber Ptolemæus Europam beschrieben hat/ist sein länge gröſſer dann die breite. Das ist ein mal gewiß/daß Europa ist ein trefflich fruchtbar vnd wol erbawen

Europa wie fruchtbar es sey.

# Announcements

- Response papers are all graded
- Note that the grades are out of 20 points based on depth of engagement with the essay prompt (40%), depth of engagement with the COLL 300 class and event (40%), and structure of the writing (20%)
- Use the rubric scores to see where you can improve, feel free to come to office hours for more detailed feedback
- Grading will be similar for the other two response papers

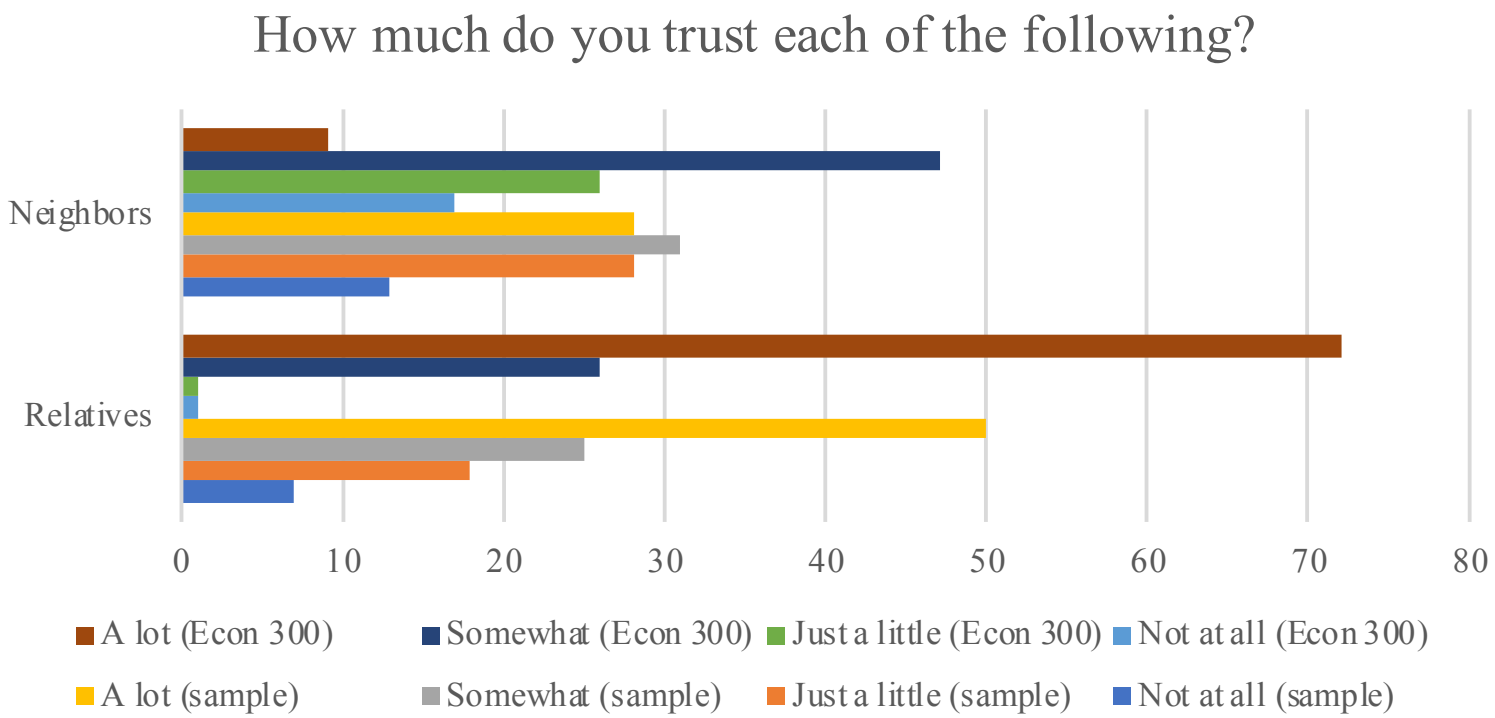
# Announcements

- We have our next COLL 300 visitor coming next week
- The visitor will be Selena Fox, co-executive director of the Circle Sanctuary (and class of '71)
- The main event will be March 27th at 5pm
- We will most likely be having an in-class visit, although that scheduling is still being worked out
- We'll spend part of class on Friday going over some background to provide context for the visit

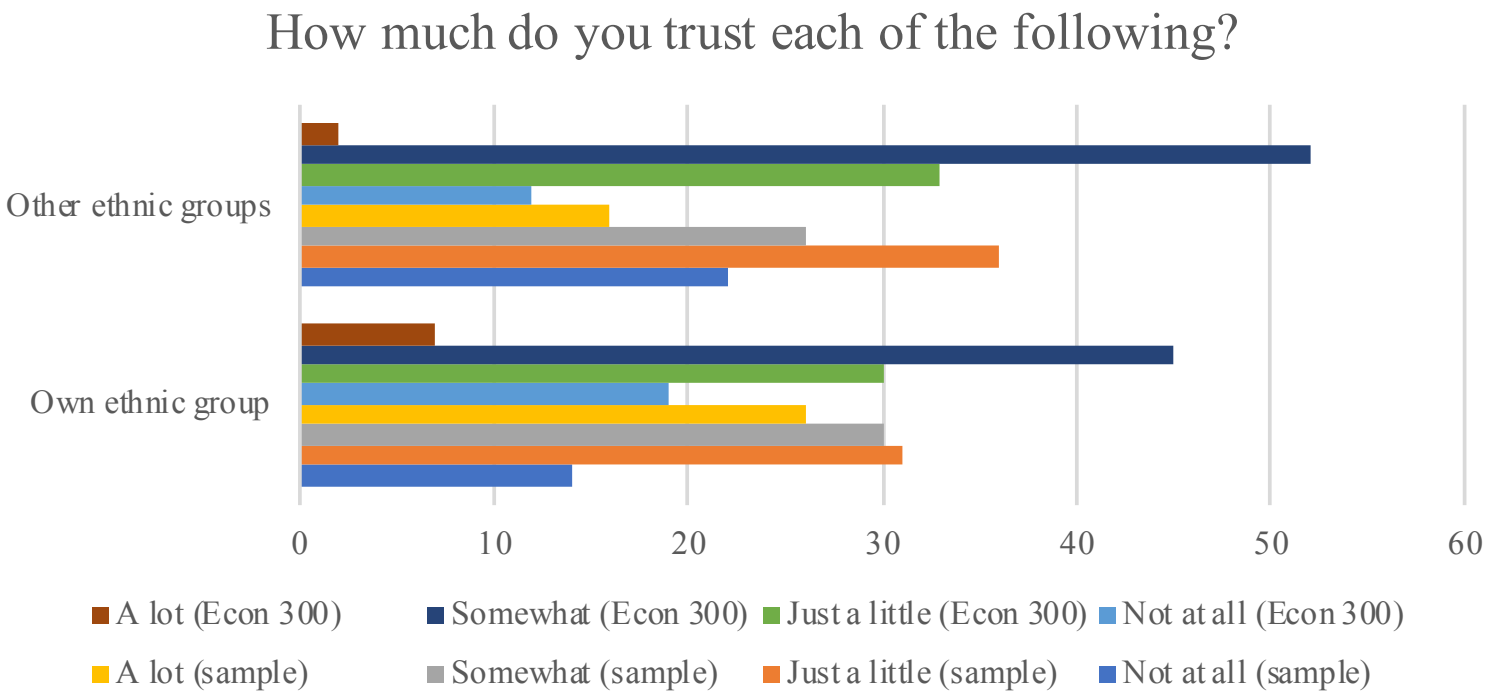
# Announcements

- We're wrapping up our section on persistence
- After that, we'll move on to thinking about religion and economics
- The next required reading is Iyer (2016) "The New Economics of Religion" *Journal of Economic Literature*
- Note that this paper is long but not particularly technical

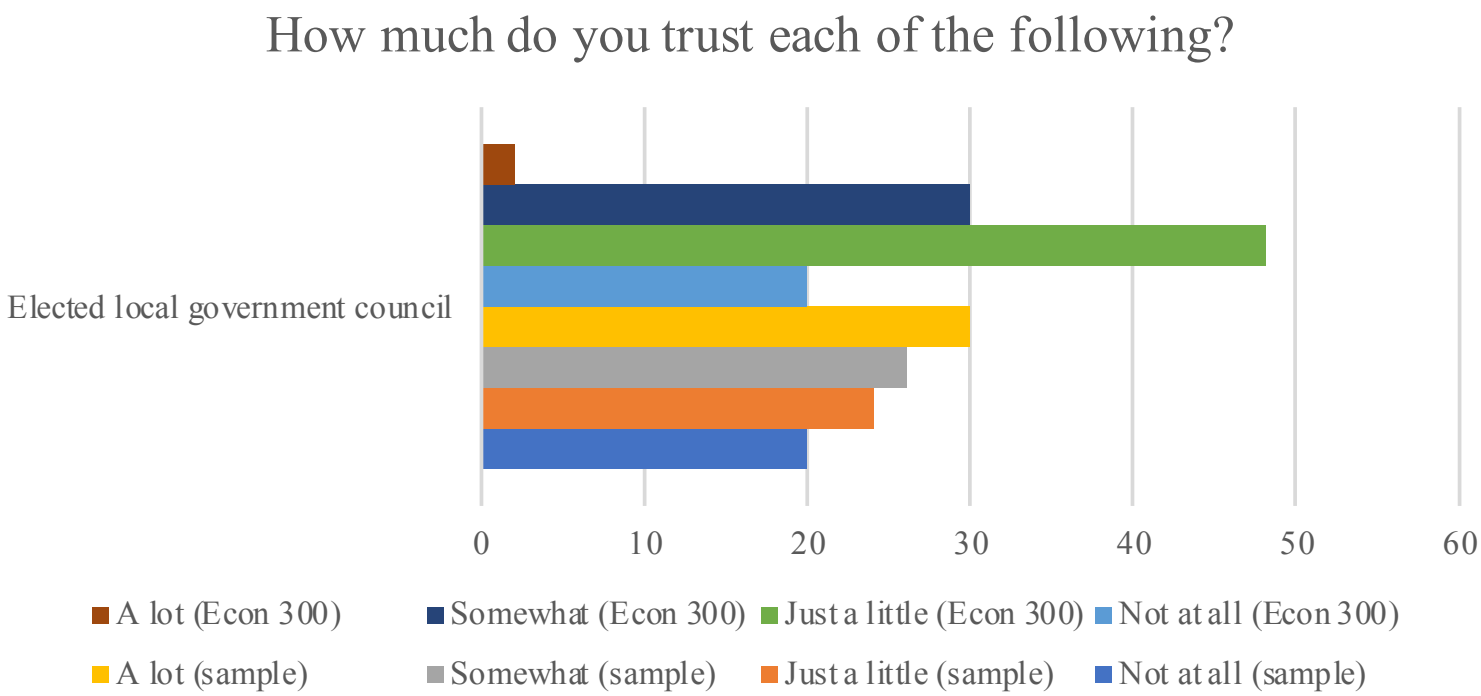
# Past Institutions and Persistence



# Past Institutions and Persistence



# Past Institutions and Persistence



# Past Institutions and Persistence

*The Austrian bureaucracy was fairly honest, quite hard-working, and generally high-minded, it probably did more good than harm. – Taylor, 1948*

# Past Institutions and Persistence

*[D]espite its diversity, the Habsburg Empire was not simply a motley conglomerate of territories and peoples...the bureaucracy, which became an efficient and fair, if sometimes overbearing, instrument of Austrian rule ... [and the legal system were among the uniting factors that] ... obtained until - and even after - the demise of the empire in 1918. – Magocsi, 2010*

# Past Institutions and Persistence

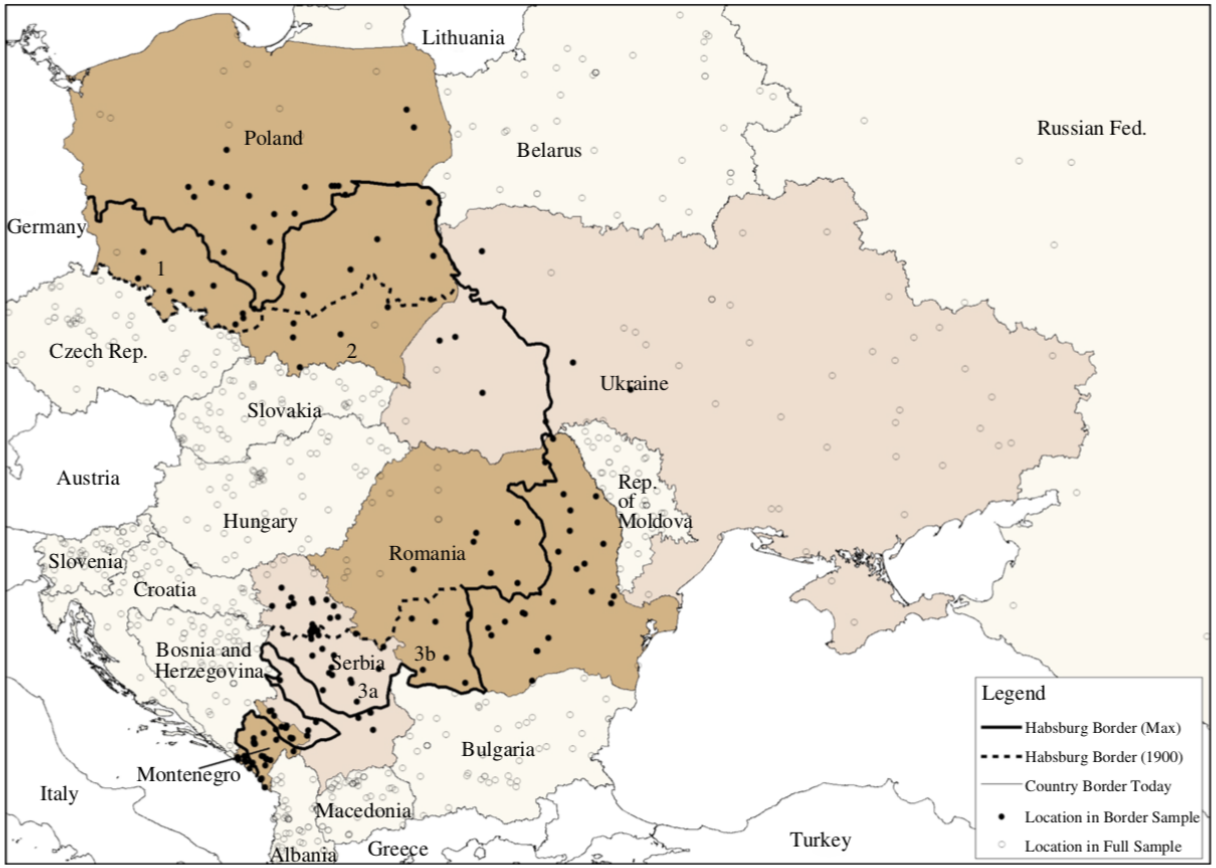



Fig. 1. *The Habsburg Empire in Eastern Europe and the LiTS Locations*

*Notes.* Habsburg border in maximum expansion, Habsburg border in 1900, borders of countries today and location of the observations in the LiTS 2006 dataset contained in the border sample and in the 17-country sample. Former Habsburg territories that are no longer part of Habsburg in 1900: 1 Silesia (1526–1742); 2 West Galicia (1795–1809); 3a Kingdom of Serbia and 3b Banat of Craiova (1718–39).

# Past Institutions and Persistence

Table 2

*Trust and Corruption in Courts and Police: 17-Country Sample*

| | Trust in courts | Trust in police | Bribes to courts | Bribes to traffic police |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Part of Habsburg Empire | 0.141 | 0.311 | −0.603 | −0.586 |
| | (0.067)** | (0.064)*** | (0.100)*** | (0.088)*** |
| Age of respondent | −0.003 | 0.006 | −0.005 | −0.012 |
| | (0.001)** | (0.001)*** | (0.001)*** | (0.001)*** |
| Male respondent | −0.074 | 0.003 | 0.014 | 0.087 |
| | (0.031)** | (0.031) | (0.040) | (0.038)** |
| Native language | 0.198 | 0.217 | −0.201 | −0.235 |
| | (0.095)** | (0.091)** | (0.136) | (0.130)* |
| Ethnic minority | −0.016 | −0.028 | −0.289 | −0.335 |
| | (0.102) | (0.091) | (0.111)*** | (0.104)*** |
| Controls for religious affiliation (6 categories) | Yes | Yes | Yes | Yes |
| Used service in last 12 months | | | 1.069 | 1.203 |
| | | | (0.087)*** | (0.066)*** |
| No. of observations | 15,830 | 16,232 | 16,794 | 16,821 |
| No. of PSUs | 850 | 850 | 850 | 850 |
| Pseudo-$R^2$ | 0.002 | 0.005 | 0.023 | 0.045 |

*Notes.* Coefficients and standard errors from ordered logit (ologit) estimation. 17-country samples: 17 countries that were formerly part of the Habsburg Empire or neighbouring countries thereof. Dependent variable in columns (1) and (2) is answer to the question 'To what extent do you trust the following institutions?' Column (1): The courts. Column (2): The police. Answer categories are: 1 = Complete distrust; 2 = Some distrust; 3 = Neither trust nor distrust; 4 = Some trust; 5 = Complete trust. Category 6 = Difficult to say set to missing in regressions. Dependent variable in columns (3) and (4) is answer to the question 'In your opinion, how often is it necessary for people like you to have to make unofficial payments/gifts in these situations?' Column (3): Interact with the courts. Column (4): Interact with the traffic police. Answer categories are: 1 = Never; 2 = Seldom; 3 = Sometimes; 4 = Usually; 5 = Always. Standard errors (clustered at the level of PSUs) in parentheses: *significance at 10, **5, ***1%. *Source.* Life in Transition Survey (LiTS) 2006; see main text for details.

# Past Institutions and Persistence

Table 8

*Results from a Business Survey*

| | Description of court system in resolving business disputes: | | |
|---|---|---|---|
| | Fair | Honest | Upholds our property rights |
| | (1) | (2) | (3) |
| *Border specification* | | | |
| Part of Habsburg Empire | 0.288 | 0.197 | 0.134 |
| | (0.131)** | (0.147) | (0.150) |
| Year when firm began operations in country | −0.003 | −0.005 | −0.003 |
| | (0.003) | (0.004) | (0.003) |
| Sector dummies (8 categories) | Yes | Yes | Yes |
| Firm size medium (50–249 employees) | 0.456 | 0.370 | 0.346 |
| | (0.140)*** | (0.182)** | (0.223) |
| Firm size large (250–9,999 employees) | 0.160 | 0.507 | 0.695 |
| | (0.191) | (0.237)** | (0.244)*** |
| Percentage of firm owned by foreigners | 0.003 | 0.003 | 0.002 |
| | (0.002) | (0.003) | (0.002) |
| Percentage of firm owned by government | 0.004 | 0.002 | 0.003 |
| | (0.002)* | (0.002) | (0.003) |
| Country-fixed effects | Yes | Yes | Yes |
| No. of observations | 881 | 865 | 868 |
| No. of PSUs | 158 | 158 | 161 |
| Pseudo-$R^2$ | 0.029 | 0.026 | 0.015 |
| *RDD specification with quadratic polynomial in latitude and longitude* | | | |
| Part of Habsburg Empire | 0.336 | 0.236 | 0.266 |
| | (0.187)* | (0.185) | (0.161)* |
| Other controls (as above) | Yes | Yes | Yes |

*Notes.* Coefficients and standard errors from ordered logit estimation. Sample: firms within 200 km of firms on the other side of the former Habsburg border (border specification)/within 200 km of the former Habsburg border based on GIS-computed distance to border (RDD specification) in those five countries that are partly Habsburg. Dependent variable in columns (1) and (2) is answer to the question 'How often do you associate the following descriptions with the court system in resolving business disputes?'. Answer categories are: 1 = Never; 2 = Seldom; 3 = Sometimes; 4 = Frequently; 5 = Usually; 6 = Always. Dependent variable in column (3) is answer to the question 'To what degree do you agree with this statement? 'I am confident that the legal system will uphold my contract and property rights in business disputes'. Answer categories are: 1 = Strongly disagree; 2 = Disagree in most cases; 3 = Tend to disagree; 4 = Tend to agree; 5 = Agree in most cases; 6 = Strongly agree. Standard errors (clustered at the level of PSUs) in parentheses: *significance at 10, **5, ***1%. *Source.* Business Environment and Enterprise Performance Survey (BEEPS) 2005; see main text for details.

# One More Case of Persistence

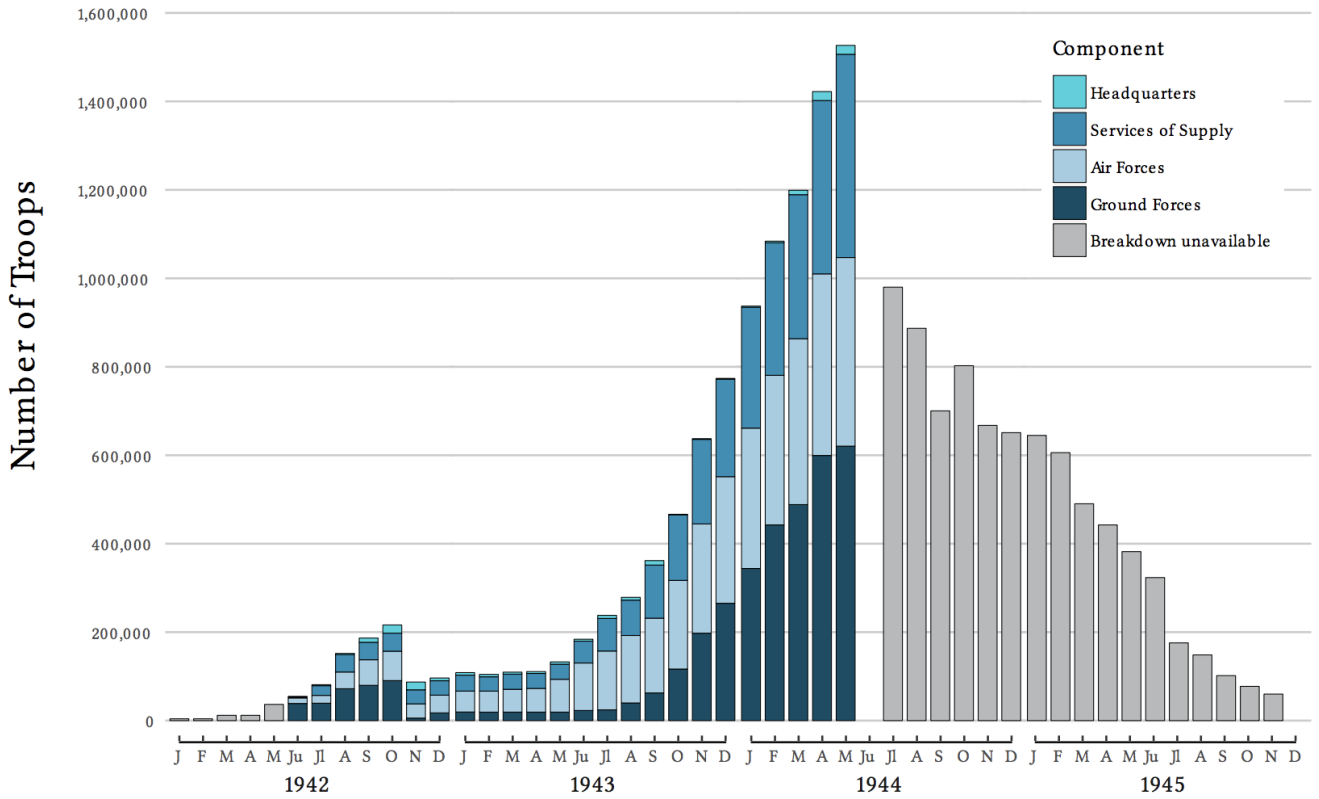



*Figure 1.* Build up of U.S. Army strength in the U.K. from January 1942 to November 1945 and, where available, a breakdown according to type. Data for June 1944 are unavailable. Sources: Ruppenthal (1978, p. 232) and Pogue (1954, p. 541).

# One More Case of Persistence

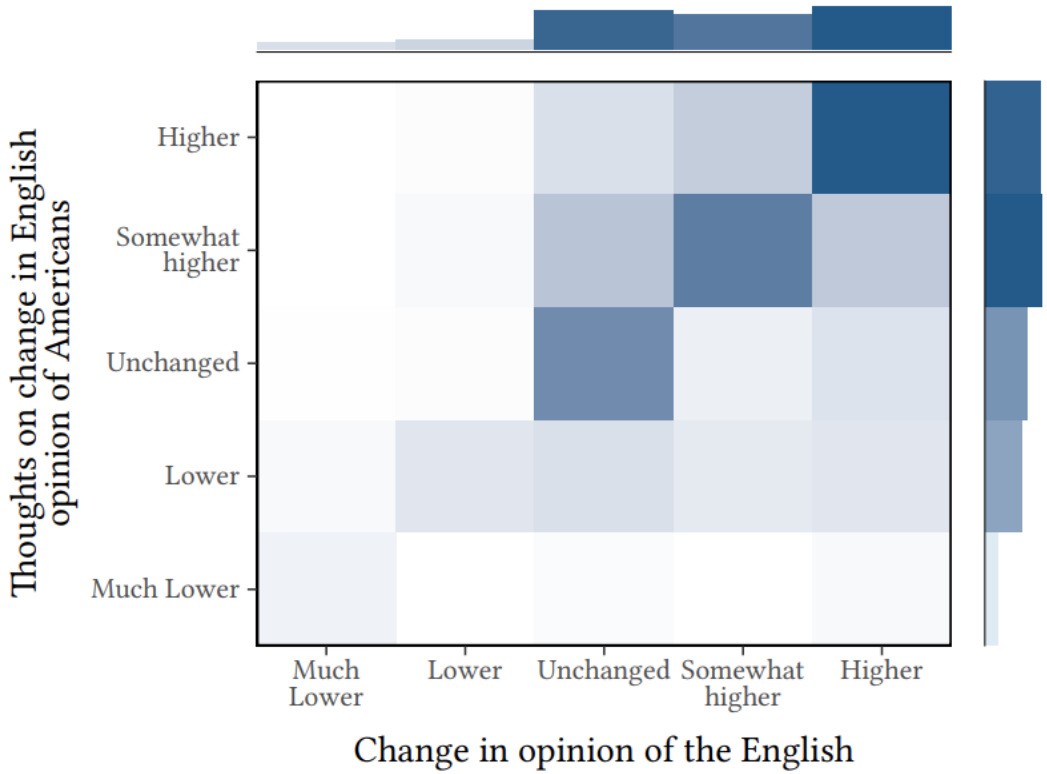



*Figure 2.* Density plot of individual black G.I.s' responses to the questions 'Has your opinion of the English people changed from what it was before you came to England?' (horizontal axis) and 'Do you think English people's opinion of Americans has been changed by having American soldiers in England' (vertical axis). Darker cells indicate more mass. The sample is 442 black G.I.s posted in Britain in November 1943.

# One More Case of Persistence

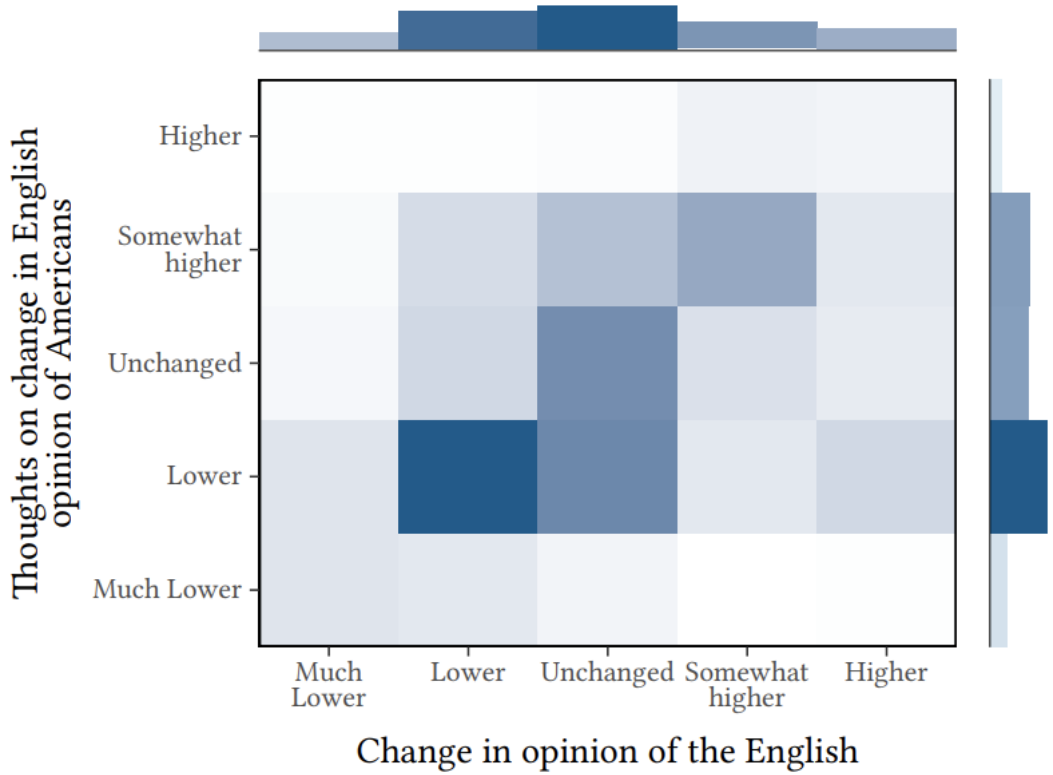



*Figure 3.* Density plot of individual white G.I.s' responses to the questions 'Has your opinion of the English people changed from what it was before you came to England?' (horizontal axis) and 'Do you think English people's opinion of Americans has been changed by having American soldiers in England' (vertical axis). Darker cells indicate more mass. The sample is 2,257 white G.I.s posted in Britain in November 1943.

# One More Case of Persistence

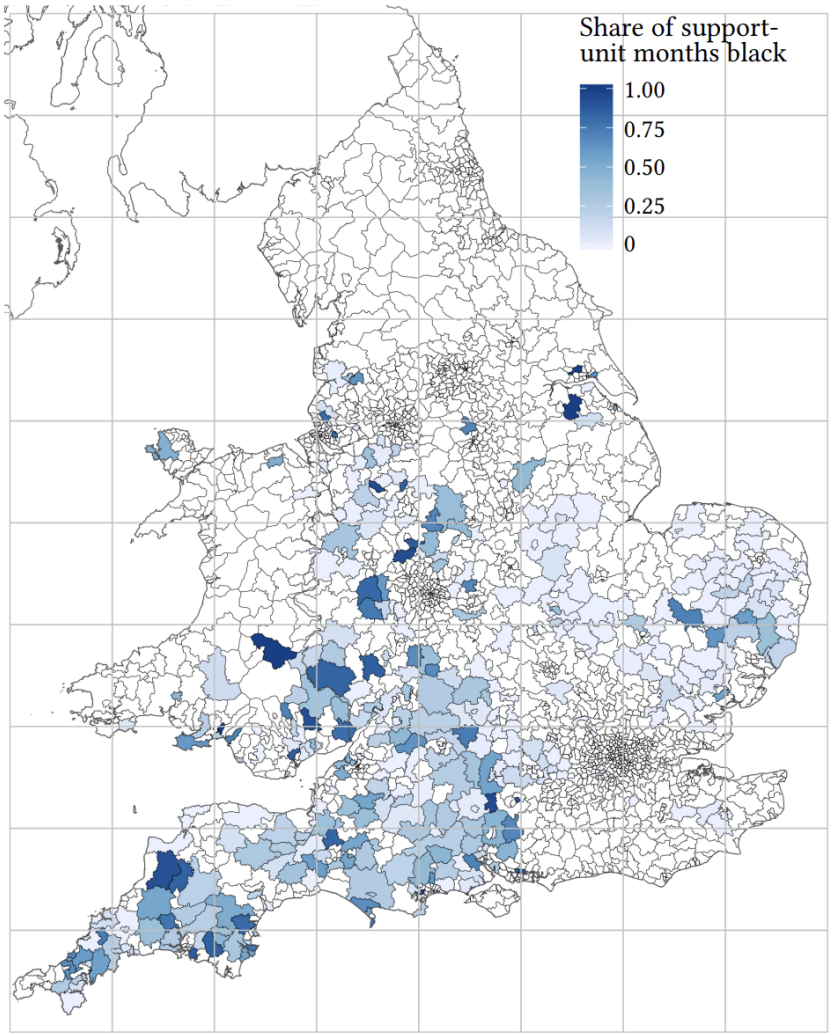



*Figure 4.* Figure shows variation across English and Welsh postcode districts in the share of support-unit months which are due to black units. Also shown are grid-cells used to generate grid-cell fixed effects

# One More Case of Persistence

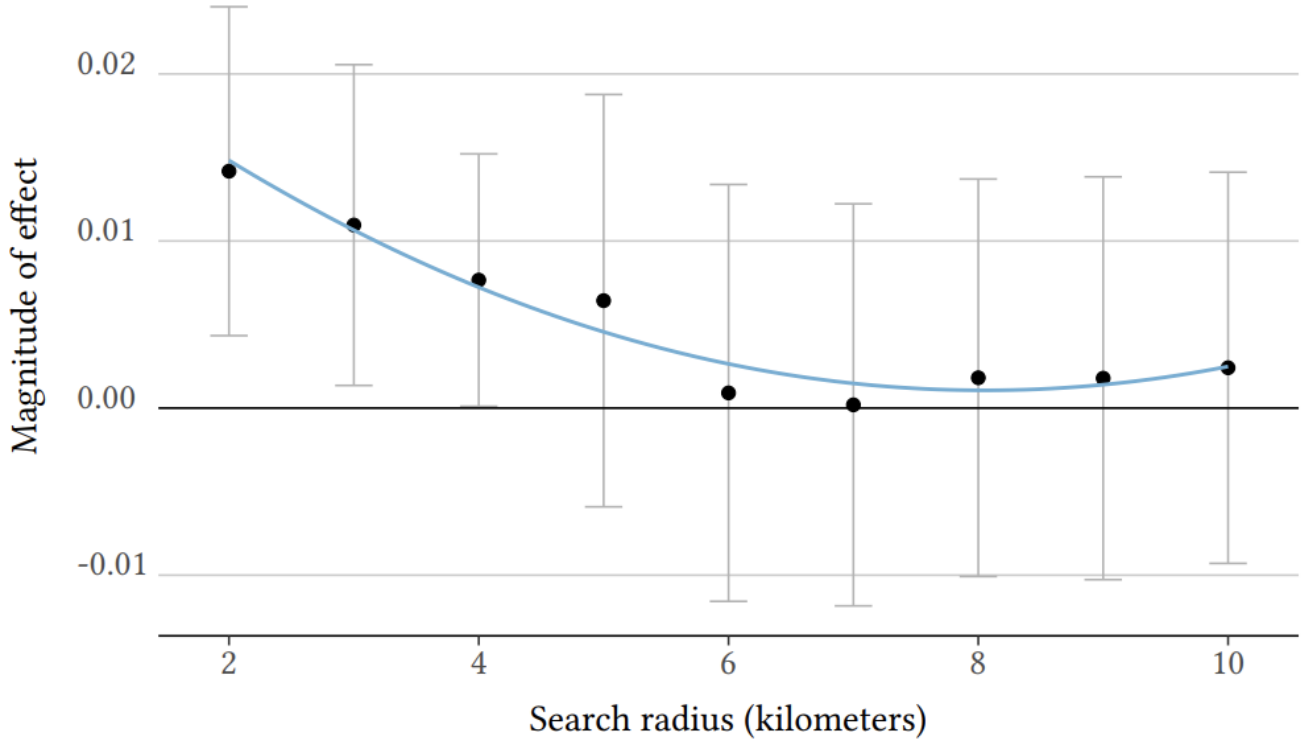



*Figure 6.* Geographic decay. Point estimates and 95% confidence intervals are displayed for eight regressions, varying the radius around a location at which bases are counted as contributing to potential contact, i.e. varying $k$ in Equation 2.

# One More Case of Persistence

*Table 7:* Effect on implicit anti-black bias

| | *Dependent variable*: IAT score (std.) | | | | | |
|---|---|---|---|---|---|---|
| | All | | | Rural | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Black unit-months (std.) | -0.0317* | -0.0270 | -0.0294 | -0.0655*** | -0.0658** | -0.0702** |
| | (0.0164) | (0.0182) | (0.0185) | (0.0250) | (0.0255) | (0.0272) |
| Support unit-months | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Demographic Controls | | ✓ | ✓ | | ✓ | ✓ |
| Grid fixed effects | | ✓ | ✓ | | ✓ | ✓ |
| Economic controls | | | ✓ | | | ✓ |
| Location controls | | | ✓ | | | ✓ |
| Clusters | 220 | 220 | 220 | 156 | 156 | 156 |
| Observations | 5,468 | 5,430 | 5,420 | 1,435 | 1,427 | 1,425 |

*Notes:* Each column reports coefficients and standard errors from an OLS regression. The unit of observation is the individual. The dependent variable is the standardized measure of implicit anti-black attitudes from the IAT. The independent variable is our measure for contact with black troops, 'black unit-months' in the postcode district (standardised to have mean zero and standard deviation of one). Demographic controls are age, age squared and gender. Standard errors (in brackets) are clustered at the local authority district level. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

Project Implicit

# Quiz Time

# Quiz Time

- Time for our fourth quiz
- Before you open it, a couple of instructions/suggestions
- The quiz is located in Course Files $\rightarrow$ Quizzes $\rightarrow$ Quiz 4 (3-20-19)
- 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

# Announcements

- We have our next COLL 300 visitor coming next week
- The visitor will be Selena Fox, co-executive director of the Circle Sanctuary (and class of '71)
- The main event will be March 27th at 5pm
- We will have an in-class visit Wednesday morning (with Prof. Maliniak's class)
- We'll use today's lecture consider a little context (and econ theory) for the visit

# Announcements

- The organizers of the Wednesday evening event would like to have a panel of faculty and students to ask Selena Fox questions
- They are hoping for a volunteer from our class
- You would go to dinner with the visitor and other faculty and students on Monday or Tuesday (or lunch on Tuesday, whichever works for you)
- You would then be on the panel during the event, getting an opportunity to ask a couple of questions
- Please email me if you are willing to volunteer

# Selena Fox

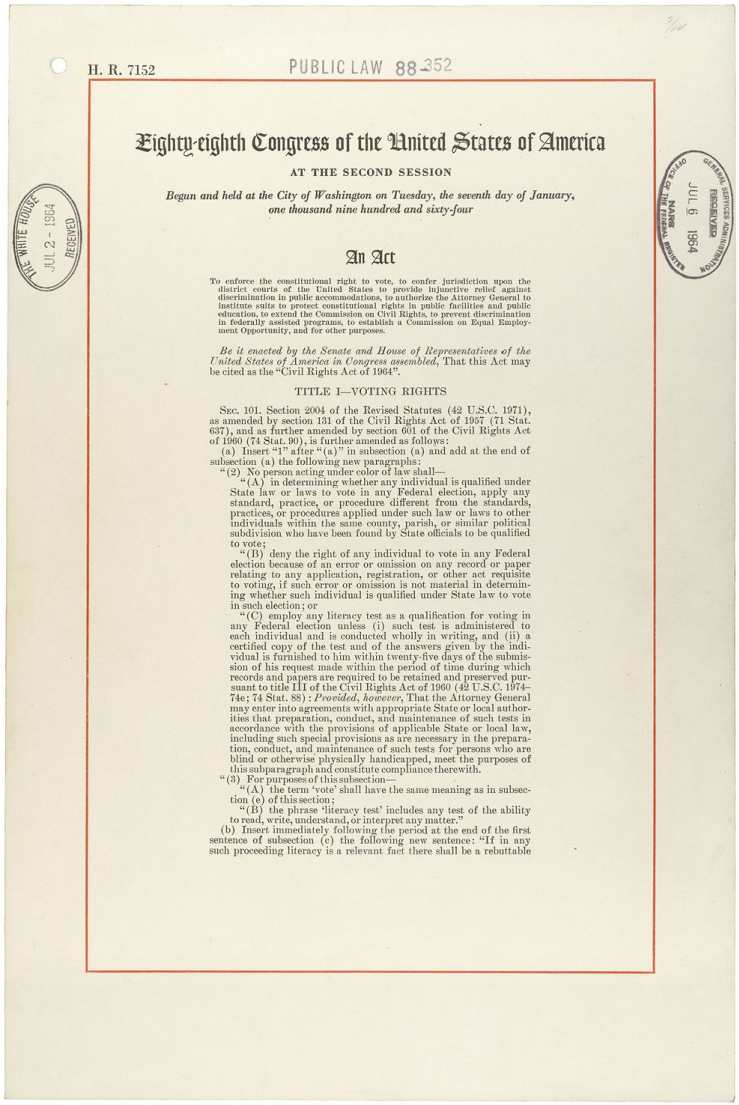
- A few quick things about Selena Fox
- She is senior minister and high priestess of the Circle Sanctuary
- Circle Sanctuary is a 'Nature Spirituality church, Pagan resource center and nature preserve with a worldwide Ecospirituality ministry'
- She founded the sanctuary in 1974
- For more on the sanctuary and her work and teachings, check out the links on Blackboard
- For now, I want to provide a bit of historical context, thinking about the institutional change occurring around the time of Selena Fox's graduation from William & Mary (1971) and her founding of the Circle Sanctuary

# Institutional Change in the US

# Institutional Change in the US

Fall of Saigon, April 30, 1975

# Institutional Change in the US



H. R. 7152 PUBLIC LAW 88-352

Eighty-eighth Congress of the United States of America

AT THE SECOND SESSION

*Begun and held at the City of Washington on Tuesday, the seventh day of January, one thousand nine hundred and sixty-four*

An Act

To enforce the constitutional right to vote, to confer jurisdiction upon the district courts of the United States to provide injunctive relief against discrimination in public accommodations, to authorize the Attorney General to institute suits to protect constitutional rights in public facilities and public education, to extend the Commission on Civil Rights, to prevent discrimination in federally assisted programs, to establish a Commission on Equal Employment Opportunity, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That this Act may be cited as the "Civil Rights Act of 1964".

TITLE I—VOTING RIGHTS

SEC. 101. Section 2004 of the Revised Statutes (42 U.S.C. 1971), as amended by section 131 of the Civil Rights Act of 1957 (71 Stat. 637), and as further amended by section 601 of the Civil Rights Act of 1960 (74 Stat. 90), is further amended as follows:

(a) Insert "1" after "(a)" in subsection (a) and add at the end of subsection (a) the following new paragraphs:

"(2) No person acting under color of law shall—

"(A) in determining whether any individual is qualified under State law or laws to vote in any Federal election, apply any standard, practice, or procedure different from the standards, practices, or procedures applied under such law or laws to other individuals within the same county, parish, or similar political subdivision who have been found by State officials to be qualified to vote;

"(B) deny the right of any individual to vote in any Federal election because of an error or omission on any record or paper relating to any application, registration, or other act requisite to voting, if such error or omission is not material in determining whether such individual is qualified under State law to vote in such election; or

"(C) employ any literacy test as a qualification for voting in any Federal election unless (i) such test is administered to each individual and is conducted wholly in writing, and (ii) a certified copy of the test and of the answers given by the individual is furnished to him within twenty-five days of the submission of his request made within the period of time during which records and papers are required to be retained and preserved pursuant to title III of the Civil Rights Act of 1960 (42 U.S.C. 1974-74e; 74 Stat. 88): *Provided, however*, That the Attorney General may enter into agreements with appropriate State or local authorities that preparation, conduct, and maintenance of such tests in accordance with the provisions of applicable State or local law, including such special provisions as are necessary in the preparation, conduct, and maintenance of such tests for persons who are blind or otherwise physically handicapped, meet the purposes of this subparagraph and constitute compliance therewith.

"(3) For purposes of this subsection—

"(A) the term 'vote' shall have the same meaning as in subsection (e) of this section;

"(B) the phrase 'literacy test' includes any test of the ability to read, write, understand, or interpret any matter."

(b) Insert immediately following the period at the end of the first sentence of subsection (c) the following new sentence: "If in any such proceeding literacy is a relevant fact there shall be a rebuttable

Civil Rights Act, 1964

# Institutional Change in the US

Voting Rights Act, 1965

# Institutional Change in the US

Lynn Briley '71, Janet Brown Strafer '71, Karen Ely '71

# Institutional Change in the US

# Institutional Change in the US

Santa Barbara oil spill, 1969

# Institutional Change in the US


Earth Day, April 22, 1970

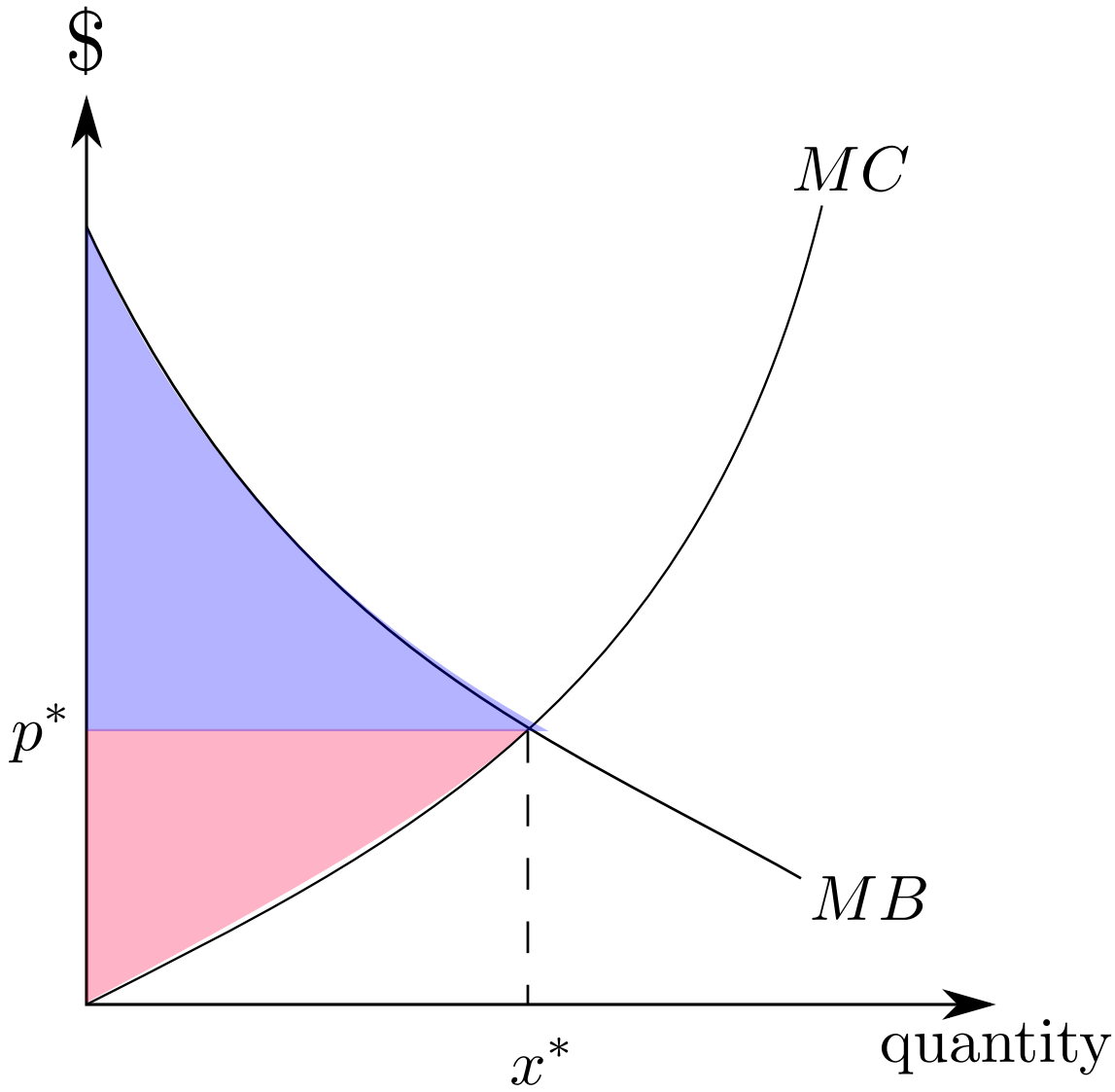
# Institutional Change in the US

William Ruckelshaus sworn in as first EPA Administrator, 1970

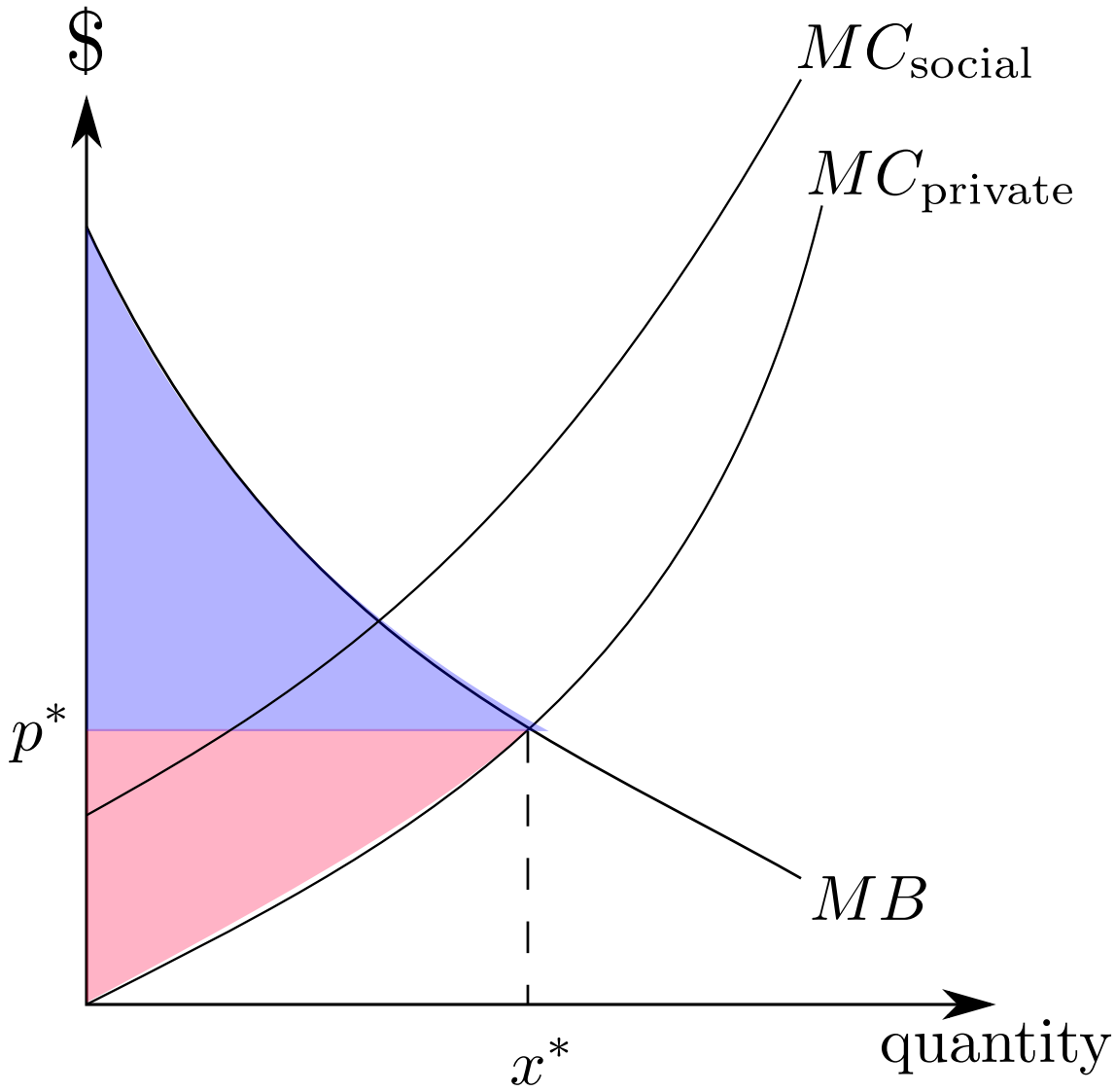
# Institutional Change in the US

- Let's think a bit about these institutions by focusing on the environment
- We see massive change to our formal governmental institutions in the 1960s and 1970s
- The creation of the EPA, the Clean Air Act, the Clean Water Act all changed laws and regulations to protect the environment
- Let's work through a bit of the economic theory that explains why these formal institutions may be needed to promote efficiency and equity
- We'll consider the case of a *negative externality*
- To the document cam for some economics of pollution

# Institutional Change in the US



# Institutional Change in the US



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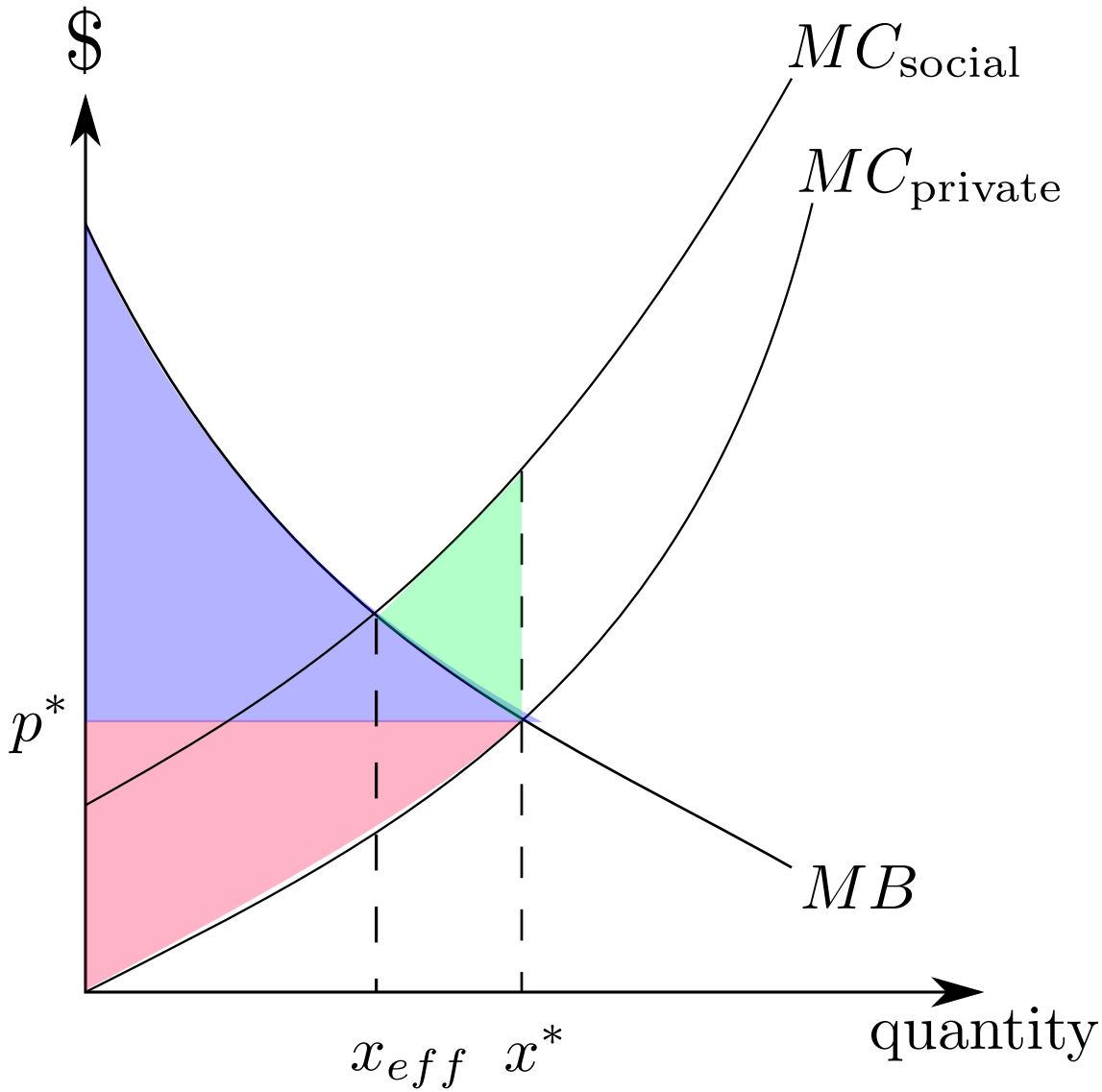
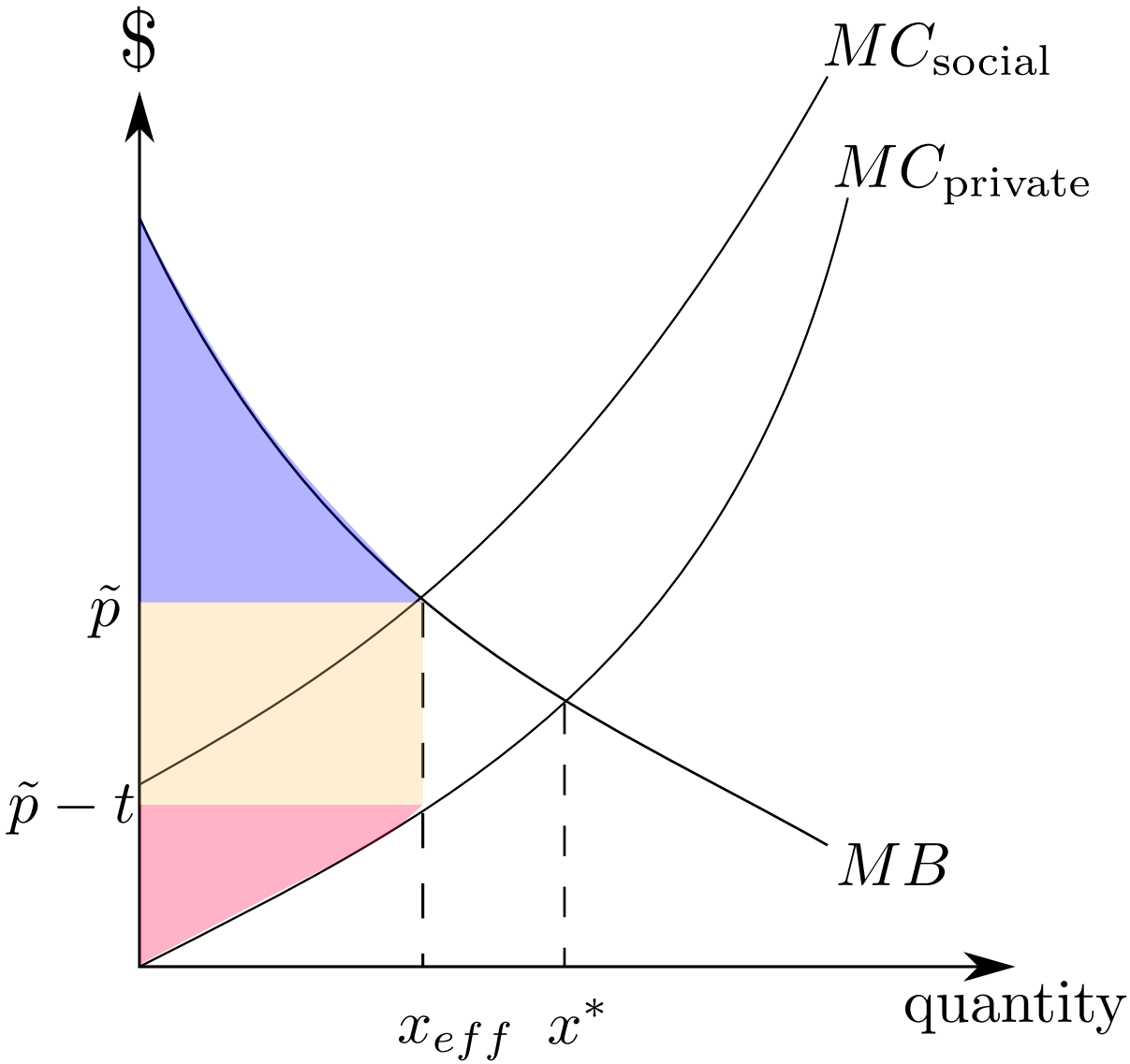


# Institutional Change in the US



# 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

# Institutional Change in the US

- The environmental legislation of the 60s and 70s provided this type of regulation
- But is there a role for informal institutions?
- This brings us back to our COLL 300 visit
- Two 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?