Persistence

Ec 764

Christophe Chamley

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References

- Acemoglu, D. C García-Jímeno, J. A. Robinson (2012). "Finding eldorado: Slavery and long-run development in Columbia," *Journal of Comparative Economics*, 40, 534-564.

- Standard question: some districts in Columbia employed more slaves in,,, . Impact on growth in subsequent years.

- Independence in 1819, slavery abolished in 1851. Slaves used in gold mines.

Data

- 1843 census with # of slaves in each municipality

- Slavery intensity (S):

  - % of slaves in population.

  - $0 - 1$

Variable	All municipalities			Colonial gold mines			p-Value for t-test for equality of means	Colonial gold mines neighbors		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.		Obs	Mean	Std. Dev.
Had slaves in 1843	839	0.419	0.493	42	0.690	0.460	0.001	145	0.400	0.490
% Slaves in 1843	839	0.006	0.018	42	0.04	0.06	0.001	145	0.02	0.04

Proportion of Slaves in the Population, 1843
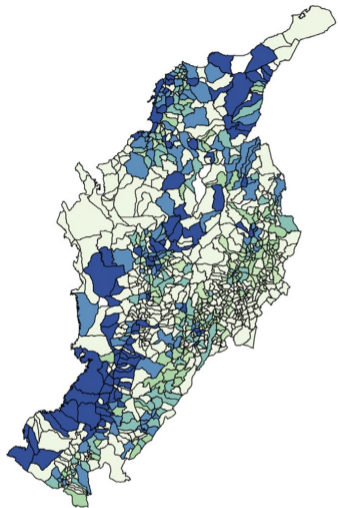
Colonial Gold Mines and their Neighbors
Dark Blue=Gold Mine, Light Blue=Neighbor
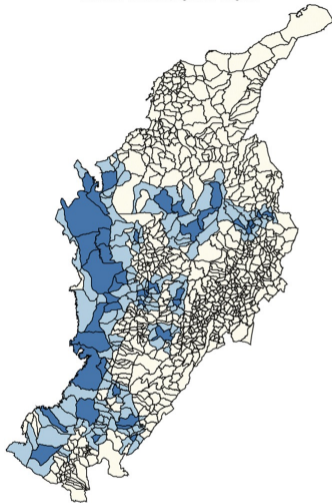
Very light green = 0-0.052. Light green = 0.052-0.104. Green = 0.104-0.156.
Green blue = 0.156-0.208. Blue = 0.208-0.26

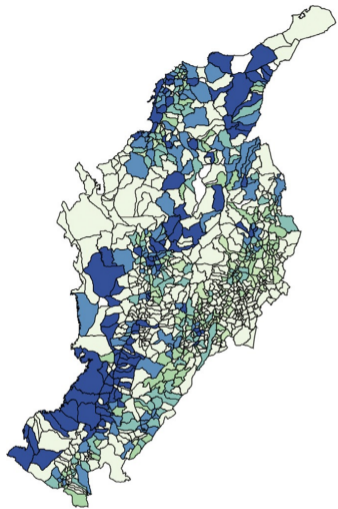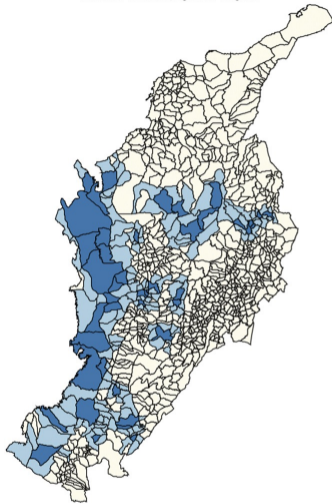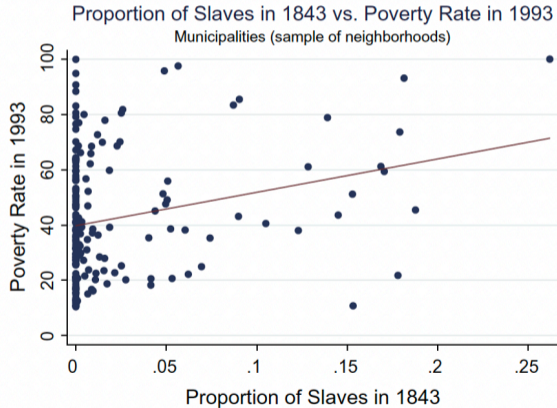Proportion of Slaves in the Population, 1843

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Hence, when allowing slavery to be conditionally correlated with municipality-specific unobservables, to proceed further our
identification strategy relies on the assumption that conditional on the common unobservables for a pair of neighboring municipalities,
the difference in slavery between them is due to the presence of a colonial gold mine in one of them.

OLS

Proportion of Slaves in 1843 vs. Per Capita GDP in 2001
Departments

Proportion of Slaves in 1843 vs. Poverty Rate in 1993
Municipalities (sample of neighborhoods)
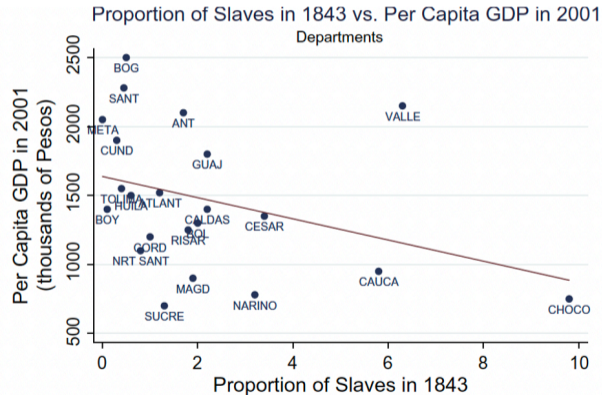
Spatial correlation and Persistence

■ Kelly Morgan (2019). "The Standard Errors of Persistence," mimeo , VoxEU.

■ —————— (2019). "The standard errors of persistence," CEPR discussion paper 13783.

" Alongside unusually high t statistics, persistence regressions usually display extreme levels of spatial autocorrelation of residuals. In a well-behaved regression, residuals should show no pattern, whereas in persistence studies neighbouring places tend to have similar values of residuals –high beside high, and low beside low.

This raises the question of whether the unusual explanatory power of some persistence regressions might be a consequence of fitting spatial noise, reflected in the spatial pattern of their residuals."

Spurious persistence

If you regressed one variable on the other without knowing that they are both artificial noise, you would probably conclude from Figure 1 that the 'historical' variable exerts an overwhelming impact on the 'modern' outcome.

Moran statistic: reliable indicator to caution us that our findings may be specious; standard test for spatial autocorrelation in regression residuals, and extreme values such as those in Figure 1 act as a warning.

Spatial Noise 1: Historical Variable
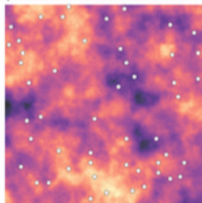
Spatial Noise 2: Modern Outcome

Significance: $p=10^{-11}$

Moran: $p=10^{-10}$

Modern Outcome=Spatial Noise 2

Historical Variable=Spatial Noise 1
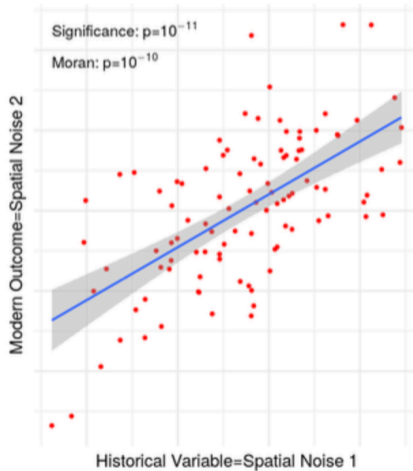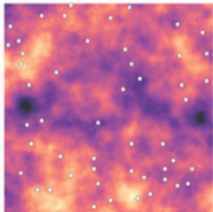
The fraction of artificial regressions where spatial noise has higher explanatory power than the original persistence variable.

● Nominal significance ● Probability noise outperforms.

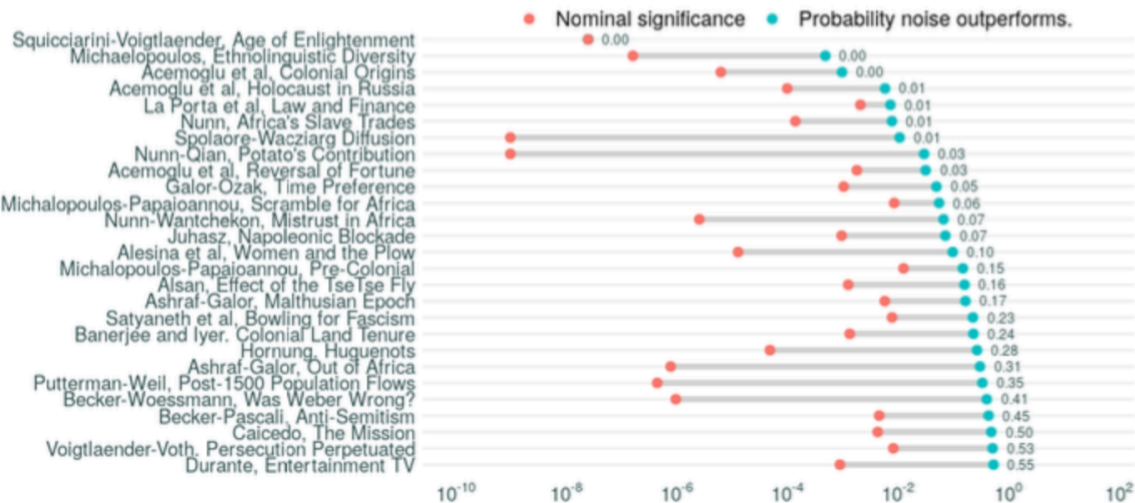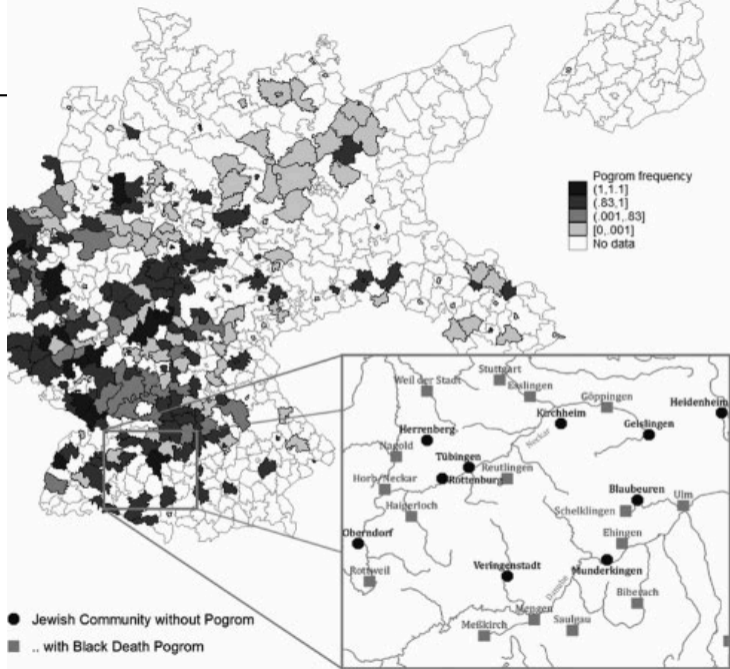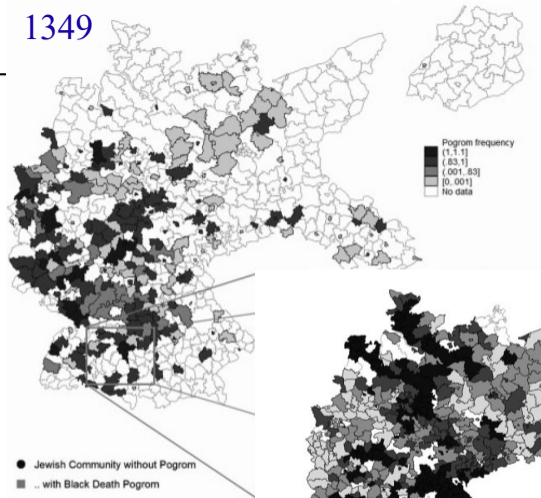|	
Squicciarini-Voigtlaender, Age of Enlightenment	0.00
Michaelopoulos, Ethnolinguistic Diversity	0.00
Acemoglu et al, Colonial Origins	0.00
Acemoglu et al, Holocaust in Russia	0.01
La Porta et al, Law and Finance	0.01
Nunn, Africa's Slave Trades	0.01
Spolaore-Wacziarg Diffusion	0.01
Nunn-Qian, Potato's Contribution	0.03
Acemoglu et al, Reversal of Fortune	0.03
Galor-Ozak, Time Preference	0.05
Michalopoulos-Papaioannou, Scramble for Africa	0.06
Nunn-Wantchekon, Mistrust in Africa	0.07
Juhasz, Napoleonic Blockade	0.07
Alesina et al, Women and the Plow	0.10
Michalopoulos-Papaioannou, Pre-Colonial	0.15
Alsan, Effect of the TseTse Fly	0.16
Ashraf-Galor, Malthusian Epoch	0.17
Satyaneth et al, Bowling for Fascism	0.23
Banerjee and Iyer, Colonial Land Tenure	0.24
Hornung, Huguenots	0.28
Ashraf-Galor, Out of Africa	0.31
Putterman-Weil, Post-1500 Population Flows	0.35
Becker-Woessmann, Was Weber Wrong?	0.41
Becker-Pascali, Anti-Semitism	0.45
Caicedo, The Mission	0.50
Voigtlaender-Voth, Persecution Perpetuated	0.53
Durante, Entertainment TV	0.55

10^{-10} 10^{-8} 10^{-6} 10^{-4} 10^{-2} 10^{0} 10^{2}

Germany: 1348-50

"Global" correlation

1349

Pogrom frequency
(1, 1.1]
(.83, 1]
(.001, .83]
[0, .001]
No data

● Jewish Community without Pogrom
■ .. with Black Death Pogrom

F...
Pogrom...

1928

Percentage Vote
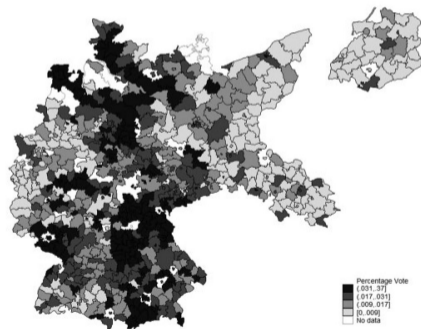(.031, .37]
(.017, .031]
(.009, .017]
[0, .009]
No data

FIGURE II
Percentage of Votes for the NSDAP in the German National Election of 1928

Main result

Dep. variable:	(1) 1920s pogroms OLS	(2) NSDAP 1928 OLS	(3) DVFP 1924 OLS	(4) Deportations ML	(5) *Stürmer* letters ML	(6) Synagogue at... OLS
Panel A: Baseline regressions						
POG^{1349}	0.0607***	0.0142**	0.0147	0.142**	0.369**	0.124**
	(0.0226)	(0.00567)	(0.0110)	(0.0706)	(0.144)	(0.0522)
ln(Pop)	0.0390**	−0.00254	−0.00123	0.241***	0.848***	0.0498***
	(0.0152)	(0.00219)	(0.00418)	(0.0841)	(0.0419)	(0.0117)
%Jewish	0.0135	0.00174	0.00701	0.0743**	0.218***	0.0262**
	(0.0114)	(0.00190)	(0.00442)	(0.0348)	(0.0383)	(0.0132)
%Protestant	0.00034	0.00029***	0.00083***	−0.0039***	−0.0053**	0.00036
	(0.00042)	(0.000088)	(.00018)	(0.0012)	(0.0023)	(0.00060)
ln(# Jews 1933)				0.815***		
				(0.0822)		
Observations	320	325	325	278	325	278
Adjusted R^2	0.054	0.043	0.080			0.098
Panel B: Matching estimation[a]						
POG^{1349}	0.0744***	0.0133***	0.0203**	161.7***	2.386***	0.103*
	(0.0182)	(0.00486)	(0.0102)	(41.33)	(0.570)	(0.0553)
Observations	320	325	325	278	325	278
Panel C: Geographic matching[b]						
POG^{1349}	0.0819***	0.0116**	0.0238***	195.8***	2.864***	0.152**
	(0.0162)	(0.00456)	(0.00746)	(33.55)	(0.579)	(0.0677)
Median distance	20.4	20.0	20.0	21.9	22.2	23.7
Mean distance	23.4	23.1	23.1	28.3	32.6	27.6
Observations	320	325	325	278	325	278

Case of Strasbourg

- Impact of political institution
  - In 1349, "fragmented authority"
  - In 1938, French republic

- November 10, 1938:
  - Sign in front of restaurant, "No Jews and dogs"

Restaurant Kammerzell
and cathedral

THE FRACTURED-LAND HYPOTHESIS*

JESÚS FERNÁNDEZ-VILLAVERDE
MARK KOYAMA
YOUHONG LIN
TUAN-HWEE SNG

Patterns of state formation have crucial implications for comparative economic development. Diamond (1997) famously argued that "fractured land" was responsible for China's tendency toward political unification and Europe's protracted polycentrism. We build a dynamic model with granular geographical information in terms of topographical features and the location of productive agricultural land to quantitatively gauge the effects of fractured land on state formation in Eurasia. We find that topography alone is sufficient but not necessary to explain polycentrism in Europe and unification in China. Differences in land productivity, in particular the existence of a core region of high land productivity in northern China, deliver the same result. We discuss how our results map into observed historical outcomes, assess how robust our findings are, and analyze the differences between theory and data in Africa and the Americas. *JEL Codes:* H56, N40, P48.

Hoffman

The fractured-land hypothesis is not without its critics. Hoffman (2015) points out that China is in fact more mountainous than Europe. Peter Turchin and Tanner Greer have advanced similar arguments.[1] Turchin goes so far as to claim that it is not Europe's fragmentation that needs explanation but China's precocious and persistent unification. The fractured-land hypothesis

Fractured Land Hypothesis

Inspired by Crafts (1977) and Turchin et al. (2013), we focus on pattern predictions rather than replicating specific outcomes. We report probability distributions over outcomes because history is contingent. An independent event could interact with existing conditions to trigger unanticipated consequences. Without that event, history may develop in a different direction. Our model allows for contingency in the outbreak and outcome of wars. Thus, our simulations are random, but with probabilities assigned by structural conditions. If and when a state emerges to dominate its neighbors is neither fluke nor destiny but a balance of structure and contingency. Our model does not aim to capture the precise borders of specific countries—which are the product of chance events—but it does aim to generate patterns in border formation that correspond to what we observe historically.
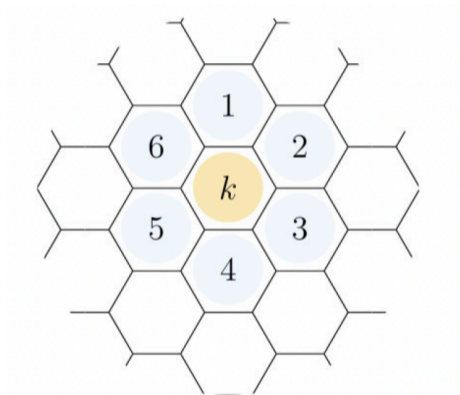
Ruggedness
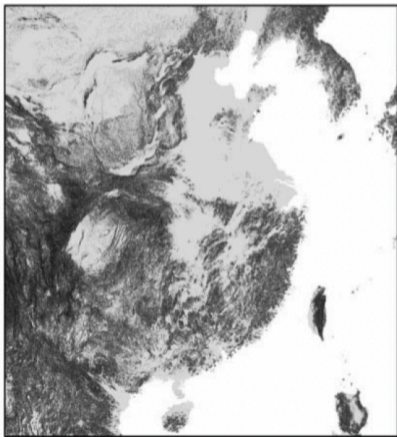
Cells (25km wide)

Probability of conflict

Most cells in our geographical space are inland. Conditional on inland cell k encountering a border conflict, the probability that its adversary is cell $\overline{k} \in \{1, 2, 3, 4, 5, 6\}$ is:

$$\frac{y_{\overline{k}}}{y_1 + y_2 + y_3 + y_4 + y_5 + y_6},$$

where $y_1, \ldots, y_6$ are the respective productivities of the six adjacent cells (see next section for the case where the cell has sea frontiers). This assumption follows the idea explained above: two highly productive cells are more likely to be tempted into a conflict with each other than one low- and one high-productivity cell.

Probability of winning in a conflict

cells in conflict. Specifically, if a war takes place between polities i and j, which controlled cells k and $\bar{k}$, respectively, polity i wins with probability:

$$(1) \qquad \pi_i = \frac{Y_{i,t}}{(Y_{i,t} + Y_{j,t}) \times (1 + \max\{\Theta \cdot \mathbf{x}_k, \Theta \cdot \mathbf{x}_{\bar{k}}\}}),$$

where $Y_{i,t}$ ($Y_{j,t}$) denotes the sum of productivities of all cells controlled by polity i (j) at period t; $\mathbf{x}_k$ ($\mathbf{x}_{\bar{k}}$) denotes the geographical characteristics of cell k ($\bar{k}$); Θ is a parameter vector that controls the weights of each geographical and climatic characteristic, and $\Theta = \{\theta_{rugged}, \theta_{hot}, \theta_{cold}\}$.

(A) Time Period 50

(B) Time Period 300

(C) Time Period 500
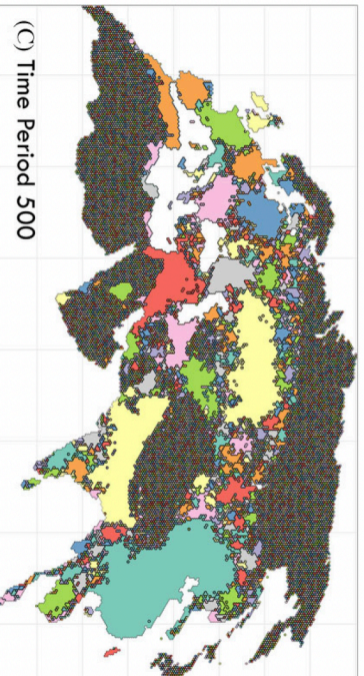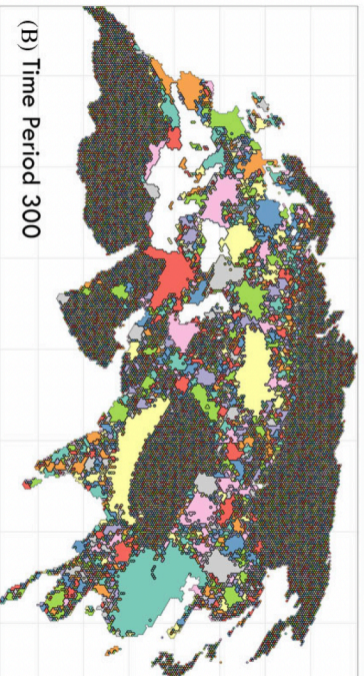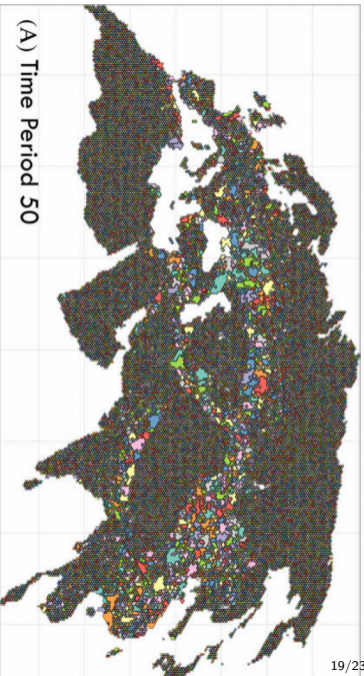
Culture: references

- Acemoglu Daron, and James A. Robinson (February 2024). "Culture, Institutions and Social Equilibria: A Framework," mimeo.

- Macfarlane, Alan (1978) The Origins of English Individualism, Oxford: Wiley-Blackwell.

- Van Zanden, Jan Luiten, Eltjo Buringh and Maarten Bosker (2012), "The rise and decline of European parliaments, 1188-1789," EHR, 65(3), 835-861.
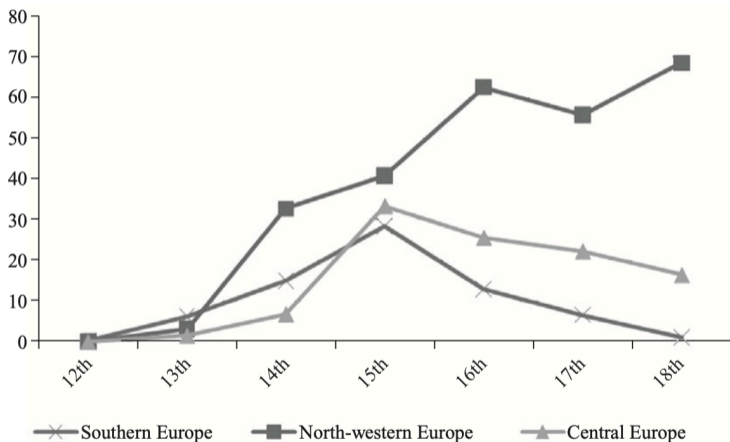
Parliaments

Figure 4. *Activity index of parliaments in three parts of Europe, twelfth to eighteenth centuries* 15

England's Individualism

In the model peasant society, farm labor is family labor and wage labor is largely absent. The presence of a very large number of landless or semi-landless laborers and servants is incompatible with the essence of peasantry. Recent work on the poll taxes and court rolls suggest very large numbers of laborers and servants. It appears probable that in many areas of England in the period before the Black Death up to half of the adult population were primarily hired laborers. It was not parents and children who formed the basic unit of production, but parents with or without hired labor. This was only made possible by the widespread use of money. The work of Kosminsky and Postan has shown that commutation of labor services for cash was widespread by the middle of the twelfth century. Cash penetrated almost every relationship; selling, mortgaging and lending are apparent in many of the documents. Most objects, from labor to rights in all kinds of property, were marketable and had a price. Production was often for exchange rather than for use.

The evidence for this re-assessment comes primarily from local and legal records. It is based on what happened in particular villages and the nature of the law. It reveals a picture of a social and economic structure so greatly at variance even with what we know of most continental countries in the nineteenth century, let alone Asian or other peasantries, that it is impossible to believe that those who travelled between England and other countries in the period up to the middle of the nineteenth century could have missed the contrasts. If we look at the writings of travellers and social commentators, we find that they did regard the English system as peculiar, particularly stressing the absence of communities, of family ties, of a fixed division between the "peasantry" and the rest. The constrasts are drawn very sharply in the work of De Tocqueville, particularly in his *Ancien Régime*. But he was only able to work back in the historical documents to the late fifteenth century. From that time, it was clear to him, England was inhabited by people with a social structure fundamentally different from that in France. Writing a century before De Tocqueville, Montesquieu observed the same differences, for when he visited England in 1729 he found himself in a country which "hardly resembles the rest of Europe." He seems to have been aware that the differences were very old, dating from a far earlier period than that envisaged by Tocqueville. If we move back another two centuries to German, Dutch,