Does political instability lead to a culture of individualism?

Baran ISCEN

a thesis submitted in partial fulfillment of the

requirements for the degree of

Bachelor of Arts in Economics

University of California, Berkeley

Department of Economics

Supervisor: **Prof. Barry Eichengreen**

Academic Year 2018/2019

Abstract

In this paper, we explore the hypothesis that a collapse in the predictability of daily life and the failure of governmental structures to provide support and security will lead to a culture of individualism of the 'everyman for himself' variety and that this can be reproduced on a regional basis over a very long period. To test this hypothesis empirically, attention is drawn to the relation between border changes historically and individuals' locus of control today. We find that regions which were more exposed to border changes historically have higher locus of control today.

Acknowledgments

I thank Professor Eichengreen for his help throughout this first journey in the research world. I "knew" before (by Socrate) that the unexamined life is not worth living. I "know" now that the straightforward paper is not worth writing.

I thank the Foundation of the Members of the Legion of Honor, which made these two wonderful years in Berkeley possible.

I thank my grand-mother who keeps an eye on me.

Contents

1 Introduction

"The musket made the infantryman and the infantry man made the democrat". It would be hard to find a pithier expression of the idea that modern war and modern society are symbiotically linked, than General J. F. C. Fuller's one in the Conduct of War. The triumph of uniform, economical foot-soldiers over individual, extravagant horsemen – in a word, the triumph of the ordinary people over the aristocracy – represented the decisive juncture of modernization. Yet despite an extensive scholarship on the topic, there has been little work aiming at thinking about whether, or not, historically warfare did also shape the contemporary man. Namely, one may wonder about whether, or not, exposure to warfare throughout history had long-lasting cultural and psychological consequences on current societies. The present article aims at fulfilling the dearth in the literature by providing evidences on the long-lasting consequences of warfare historically on people's self-reliance.

In Europe, the modern war was the product of three distinct kinds of change, administrative, technical and ideological. Additionally, it fostered a universe of intense military competition. Until now, scholars usually associated this intense competition to the advent of the modern territorial state as well as Europe's great divergence from the rest of the world. Paul Kennedy, for example, pointed out to Europe persistent military rivalries and competitive markets as the determinants of European domination on technology – among which the gunpowder was an essential part – conferring later a decisive comparative advantage to the continent in the race to the New World. Nonetheless, this intense competition had also more direct and effective consequences. Namely, intense military competition created a context of high-political instability, frequent allegiance changes and border changes in border adjacent

regions. Abramson (2016) even argued that the presence of competing historical border precedents was central to the emergence of territorial claims later, creating a "territorial disputes trap".

I argue in this paper that political instability could have had persistent effects on political behavior and people's self-reliance today. In other words, one hypothesis explored in the following pages is that the collapse in the predictability of daily life and the failure of governmental structures to provide support and security could have led to a culture of individualism, of the "everyman for himself" variety and that this could have been reproduced on a regional basis over a very-long period.

To show this, I build a variable that captures the frequency of border changes in Europe that happened from 1000 to 1900 at the regional level (NUTS 2). To further precise the mechanism through which border changes could have impacted people's locus today, I build additional variables measuring political instability and political fragmentation throughout history. I finally provide anecdotal evidences advocating for the fact that numerous boundary changes could have indeed generated persistent uncertainty over both the function and the probability that any new border will remain in place, enhancing people's self-reliance in the long-run. Pushed to an extreme, uncertainty over both function and the probability that any new border or polity will remain in place could be seen as the antechamber for the State of Nature, it is argued, where "men live without a common power to keep them all in awe, (they) are in that condition which is called warre: and such a warre as if of every man against every man".

2 Literature review

The present article aims at better understanding the consequences of conflicts and contributes to the literature on the aftermaths of wars. Until now, the literature mainly focused on warfare as a decisive factor to understand the formation of nation-states in Europe. (Tilly 1975, 1992; Mann 1986; Brewer 1989; Downing 1992; Besley and Persson 2009; Gennaioli and Voth 2014). Relatedly, the hypothesis that such total phenomena could have shaped individuals' beliefs and political attitudes in the long run was more or less ignored. This contribution adds to the literature on the aftermaths of conflicts a cultural dimension.

This paper contributes to the literature on the historical origins of economic developments as well. I provide evidences that political instability historically shaped individual's locus of control, which turned out to be an advantage in the modern economy (Gorodnichenko and Roland, 2015). Once again, while the existing literature documented several channels that relate warfare and state formation to modern prosperity (Bates 2010; O'Brien 2011; Rosenthal and Wong 2011; Dincecco and Prado 2012; Voigtländer and Voth 2013a, b), our findings adds a cultural dimension to the literature.

In addition, this contribution cements the growing literature on borders' effects on political behavior. More precisely, we complement the literature on the persistence of coordination networks around old-boundaries even after boundary changes. Gavrilis (2008) shows that when borders change, individuals often keep coordinating themselves around old boundaries given persistent economic and political incentives. This mechanism is at the very heart of this thesis, since I argue that frequent boundary changes likely led individuals to scale-down their coordination networks and rely more on themselves, in the long-run.

Finally, this paper strengthens the literature on the cultural origins of contemporary societies. In particular, the latter props up the burgeoning literature on the roots of the locus of control. Ross (2019) argued that ancestral economic experiences had persistent effects on individual locus of control. The degree of control that preindustrial societies had over crop yields arguably shaped descendants' beliefs about the "importance of their own actions in shaping their outcomes". Here, I analogously present evidences that the degree of political uncertainty to which individuals were exposed likely shaped their beliefs about the importance of their own actions in the long-run.

3   Analytical discussion

3.1   The relevance of the locus of control

The locus of control is commonly defined as a "generalized attitude, belief, or expectancy regarding the nature of the causal relationship between one's own behavior and its consequences". Put simply, an individual with an internal locus of control will attribute life outcomes to his own action while an individual with an external locus of control will tend to think that life outcomes stem from circumstances beyond his own control. On the one hand, thus, "internal locus" could be seen as a relevant proxy for individualism, whereas external locus of control captures a variety of outcomes. "External locus of controls" individuals believe that luck, chance, or others' actions are more likely to affect them, compared to their own actions.

Widely studied in social sciences – and more particularly in psychology – the locus of control has been nonetheless curiously overlooked in the economic literature. In this paper, I claim that the locus of control is a meaningful variable with important economic implications. Numerous scholars have argued that more internal locus of control is positively linked with higher education, human capital investment, faster earnings growth, quicker reemployment, parental investment or even anti-immigrant sentiment (Findley and Cooper 1983; Skinner et al. 1998; Judge and Bono 2001; Eccles and Wigeld 2002; Ng, Sorensen and Eby 2006; Cobb-Clark 2015). The locus of control appears to be also strongly related to individualistic behaviors (Borghans, Meijers and ter Weel 2008). It appears therefore reasonable to think that if the collapse in the predictability of daily life and the failure of governmental structures

led to a culture of individualism over a very-long period, the locus of control would likely capture this.

3.2 Historical anecdotal evidences

The provocative thesis defended in this paper is that regions where boundaries changed a lot correspond to places in which people are the more individualistic today. Indeed, borders variability certainly enhanced uncertainty over the permanence of the political environment and in addition led to low-state capacity. This in turn considerably increased the cost of coordinating behavior around the new political environment. A corollary being that individuals more exposed to political uncertainty had incentives to coordinate themselves around old and persistent networks. Put simply, they should have relied more on themselves, or some permanent lower-scale structures such as informal kinship and/or community networks.

Historians have shown that in many settings old boundaries kept affecting people's attitudes, despite the fact these boundaries were removed from the map. For example, Wolf (2005) shows that pre-World War 1 partition of Poland still predicts internal economic patterns during the interwar period, even though those borders and related institutions were not relevant anymore. Between 1772 and 1795, the "noblemen's republic of Poland" was split into three pieces: the tsarist Russia, the Habsburg monarchy and Prussia. Interestingly, Poland was reunified at the end of 1918, after more than 120 years of political and economic division. The authors finds that the German-Russian and Austrian-Russian partition into the new Polish state still predicts export shipments across all sectors of the economy during

the interwar period.

Additionally, Abramson (2016) argues that the numerous border changes that occurred between French territories and China led to locals' uncertainty over the persistence of a new border. France and China signed a treaty in 1887 in which they agreed to form a new boundary. Curiously, the latter was modified 12 years after the signature of the border agreement, and frequent changes to the concessions of the agreement were made in-between. The uncertainty about the true location of several portions of the 1200-kilometer border was such, it is argued, that not only people kept coordinating their behaviors around old boundaries, but more so numerous incidents happened with Vietnamese constructing projects on the "wrong side" of the boundary (Chang 1985, 20– 2).

Along these lines, many of the regions which experience major political instability historically correspond to places where strong regional cultures persisted over a very long period of time. The south-central France, for instance, was successively a focus of the Albigensia heresy, Huguenot Protestantism and rural communism, which may all reflect the persistence of an "oppositional" culture over several centuries. Alsace-Lorraine could illustrate another textbook case. The region experienced multiple changes of allegiance between France and Germany in its history. Recently, Gehring and Dehdari (2019) provided evidences that descendants of occupied Alsatians developed stronger regional and regional relative to national identity. They are also in favor of shifting policy competences to the regional government, giving more autonomy to the regional government and determining education policies at the regional level.

Finally, one could "naively" point out that regions particularly exposed to political instability – where individualistic behaviors supposedly developed over a long-period of

time – were also places in which state direct rule was often the most pervasive. The Vietnamese used forced migration of ethnic Han populations at the Chinese border in the late 1970s to consolidate the border region (Chang 1985), many European nations-to-be relied on education and literacy (Anderson 1991; Darden 2013; Deutsch 1953) as well as repression (Downing 1992) to consolidate their territorial control and avoid any rebellion.

4   Empirical Strategy and Data

4.1   A description of the data

We use the Euratlas Digital Atlas (Nüssli, 2010) to build our different variables of interest. The Nüssli data describes sovereign independent and dependent states boundaries in Europe, measured in panels of one-hundred year. The Nüssli data has been proven to reflect accurately the reality of the boundaries in Europe and was used in important economic history contributions (Stasavage 2011a; 2011b; Blaydes and Chaney 2012). Some scholars pointed out that the Nüssli data omits a few small independent principalities, or ecclesiastical units, which were probably forgotten while creating the digital copy of the maps. Nonetheless, these flaws are not likely to threaten our analysis, and we choose to ignore them. We use the Geographic Information Systems (GIS) to create our different measures of border changes, political instability and political fragmentation. We proceed by projecting the relevant maps of interest and track for example the history of boundary changes at the regional level.

We use an extended version of the Correlated of War dataset widely used in social sciences. Our data extends back to year 0 until year 1900. The conflict catalog lists all sovereign state wars that occurred during this period and that are coded with (i) the protagonists (ii) the place where the conflict took place, with its latitude and longitude (iii) dummies for the nature of the conflict (i.e. whether the conflict was religious or not, naval or not) (iv) the date of the conflict

We collect data on natural geographical controls as well, to further tease out the

effects of potential sources of omitted variable bias. Are therefore collected kilometers of rivers within a region, its latitude and longitude, the ruggedness and the agricultural suitability of its soil. All data are drawn from FAO's GAEZ combined land suitability dataset. The ruggedness data is public and comes from Nunn and Puga (2012).

Our empirical analysis of the association between border variability and individualistic culture historically is based on the integrated file of the European Values Study (EVS). The European Values Study (EVS) is a large-scale, cross-national, repeated cross-sectional survey research program on basic human values. It provides insights into the ideas, beliefs, preferences, attitudes, values and opinions of citizens all over Europe. In particular, we focus our attention on the following question asked to respondents in the European Values Study:

Some people feel they have completely free choice and control over their lives, and other people feel that what they do has no real effect on what happens to them. Please use the scale to indicate how much freedom of choice and control you feel you have over the way your life turns out? (Q10)

4.2   Empirical strategy and results

The main OLS specifications that we estimate are:

$$LOCUS_i = \alpha + \beta \times WARS_i + \gamma' \mathbf{X_i} + COUNTRY_i + \epsilon_i \tag{1}$$

$$LOCUS_i = \alpha + \beta \times BORDER\_CHANGE_i + \gamma' \mathbf{X_i} + COUNTRY_i + \epsilon_i \tag{2}$$

where the LOCUS variable corresponds to the average locus of control at the NUTS 2 level, the WARS variable measures the exposure to warfare historically normalized by region' size, BORDER_CHANGE variable captures the average border variability from 1000 to 1900 still at the NUTS 2 level, the COUNTRY variable measures country fixed-effects, X corresponds to a vector of geographical and institutional controls that we include as robustness check. All standard errors are robust, clustered at the grid cell level to account for any within-grid serial correlation in the error term.

An important concern with this setting is the omitted variable bias. There might be unobserved time and regions varying factors that influenced both borders changes, were involved in conflicts and led to greater locus of control today. We add country fixed effects in all the settings to rule out any country-invariant possible source of bias. We additionally control for variables which might all potentially drive our results, either time-invariant regional characteristics such as the presence of trade routes, soil quality, terrain ruggedness or caloric suitability, or time-varying regional characteristics such as proxy for urbanization, political institutions.

The results obtained are in many ways puzzling. Table (2) shows that the correlation between historical exposure to border change and the locus of control today is robust and positive. The coefficient in the regression resists well to the different waves of control added, both in magnitude and in terms of statistical significance. There seems to be evidences that border changes throughout history could have had a role in shaping individuals' internal locus of control. On the other hand, the puzzling fact consists in the non-significant war variable, of opposite sign. One source of explanation might be that although wars and border changes are intrinsically related (i.e. border changes were often the consequences of sovereign

states disputes), both factors could have affected the locus of control separately. Wars were synonyms of stochastic, unexpected and sustained shocks whereas changes in political environment were often not perceived as shocks in itself. For instance, the eighteenth-century transfer of Silesia from Austria to Prussia is said to have aroused little concern, or even interest, among its inhabitants. Also, the fact that the interaction variable of conflicts and kilometers of borders within a region is positively related to the locus, appears as another argument in favor of wars and borders change having different consequences on the locus of control. Of course, one cannot rule out the hypothesis that these results are simply driven by an omitted variable bias, such as the diffusion of Protestantism which could have affected the locus of control and taken place amid a lot of conflicts. Another serious critique concerns the accuracy of the measure of border change in itself. This measure not only puts equal weights on every single boundary change, should this be accomplished in an orderly fashion without an accompanying deterioration in levels of taxation, or security. But it also puts extreme weights on national boundary changes as a factor promoting unpredictability whereas it completely ignores other factors of interest, such as cross-border raiding, banditry, or even changes of allegiances in non-borderlands regions.

4.3   Robustness checks

To this point, we have shown evidences for a positive robust correlation that runs from historical political instability to higher locus of control today. Nonetheless, the ways in which the past history of states affected individuals' beliefs still have to be determined. One could indeed claim that political instability affected people's self-reliance through the

uncertainty created by ruler's interplay. In the same vein, it could be argued that these results were driven instead by safety concerns, even more sensitive in minority-dense regions. In this third section, I explore the hypothesis that political instability could have had persistent effects on political attitudes and people's beliefs through the collapse in the predictability of daily life, that is to say the uncertainty created by rulers' changeover. To further test this hypothesis, I build three additional variables of interests: DIFF_STATE which consists in the number of allegiances changes that occurred over a particular region, POL_FRAG which consists in the number of different states that ruled over a particular region, and DURATION which consists in a variable that measures political instability in terms of duration. It takes 1 if many successive polities ruled over a short period of time, and 0 if a unique polity happened to rule over the whole period. Assuming that the main mechanism through which state history shaped individuals' beliefs was the uncertainty created by political instability, one would expect the coefficient of the border change variable to shrink in the presence of the new variables built. However, none of the variables reach statistical significance. In addition, they barely affect the magnitude of the BORDER_CHANGE coefficient, which remains robust and statistically significant in all settings. That said, drawing any further conclusions at this stage and with this simple cross-sectional study would be premature.

5   Conclusion

In this article, I began to explore the hypothesis that a collapse in the predictability of daily life and the failure of governmental structures to provide support and security will lead to a culture of individualism of the 'everyman for himself' variety and that this can be reproduced on a regional basis over a very long period. To test this hypothesis empirically, attention was drawn to the relation between border changes historically and individuals' locus of control today.

This first confrontation with this provocative, difficult and nonetheless exciting broad thesis leaves us with a very robust correlation between border changes historically and the locus of control today. At this stage, any furthermore interpretation would be blameworthy and we are therefore abstaining ourselves from inconsequential statements. One thing is certain: there is room for improvement.
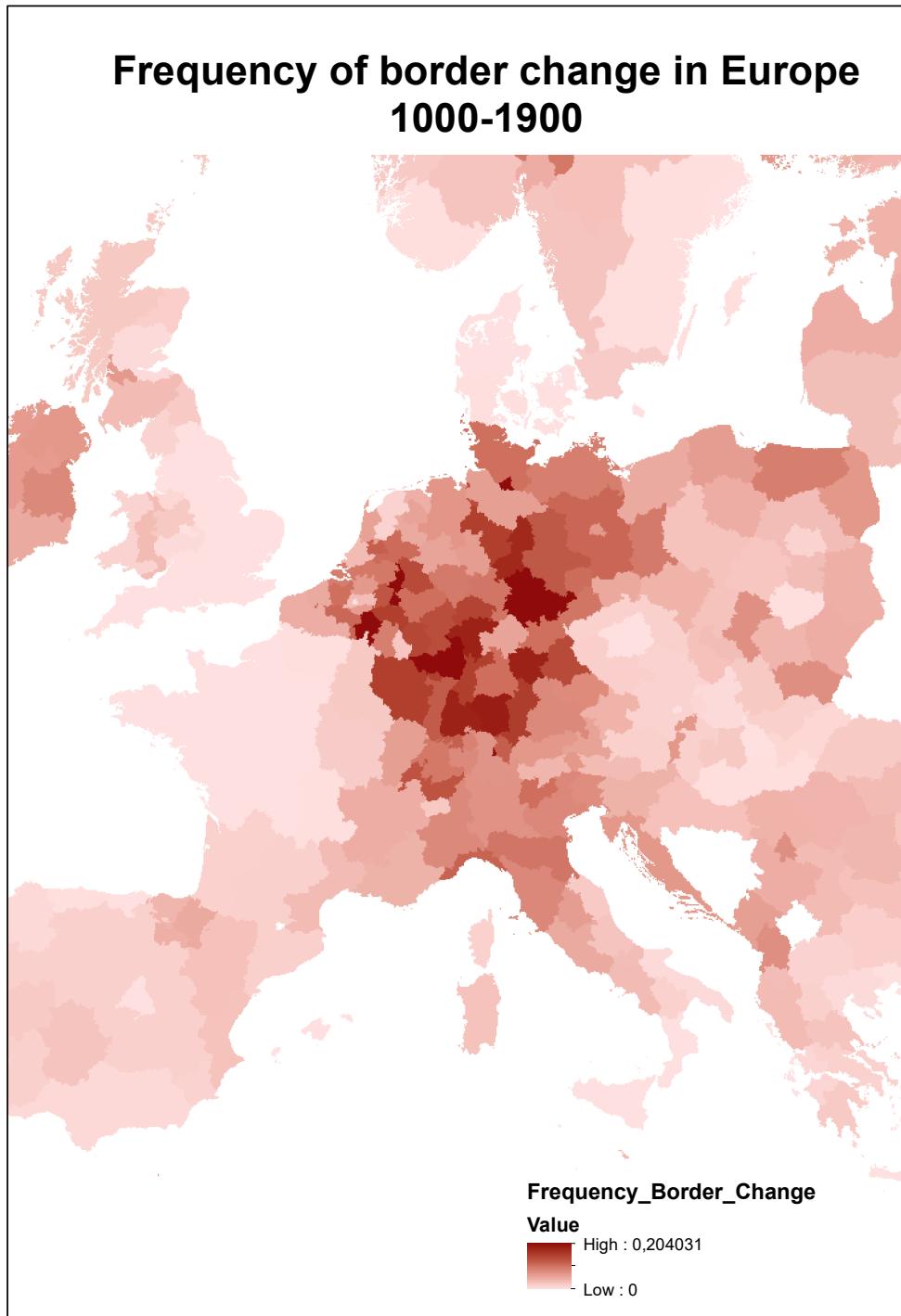
For instance, one area of improvement would consist in thinking carefully about the different paths through which the state could have affected individual beliefs. At this point, it is not clear in what ways the past history of states is important for these beliefs. Also, the focus was placed here on national boundary changes as a factory promoting unpredictability. One could nevertheless suspect that other factors such as cross-border raiding or banditry are as, if not more, relevant in this context than a boundary change in itself, should this be accomplished in an orderly fashion without an accompanying deterioration in levels of taxation or security. It would also be worth considering the possibility that an increased emphasis on informal kinship and/or community networks might also result from these circumstances – at any rate if these networks were not themselves disrupted by pro-

longed warfare, as is said to have happened in parts of Germany during the 30 Years War. The extent to which regional cultures persist over long periods is, of course, uncertain, but one possible example that pops up is the area of south-central France successively a focus of the Albigensian heresy, Huguenot Protestantism and rural communism, which may reflect the persistence of an 'oppositional' culture over several centuries.
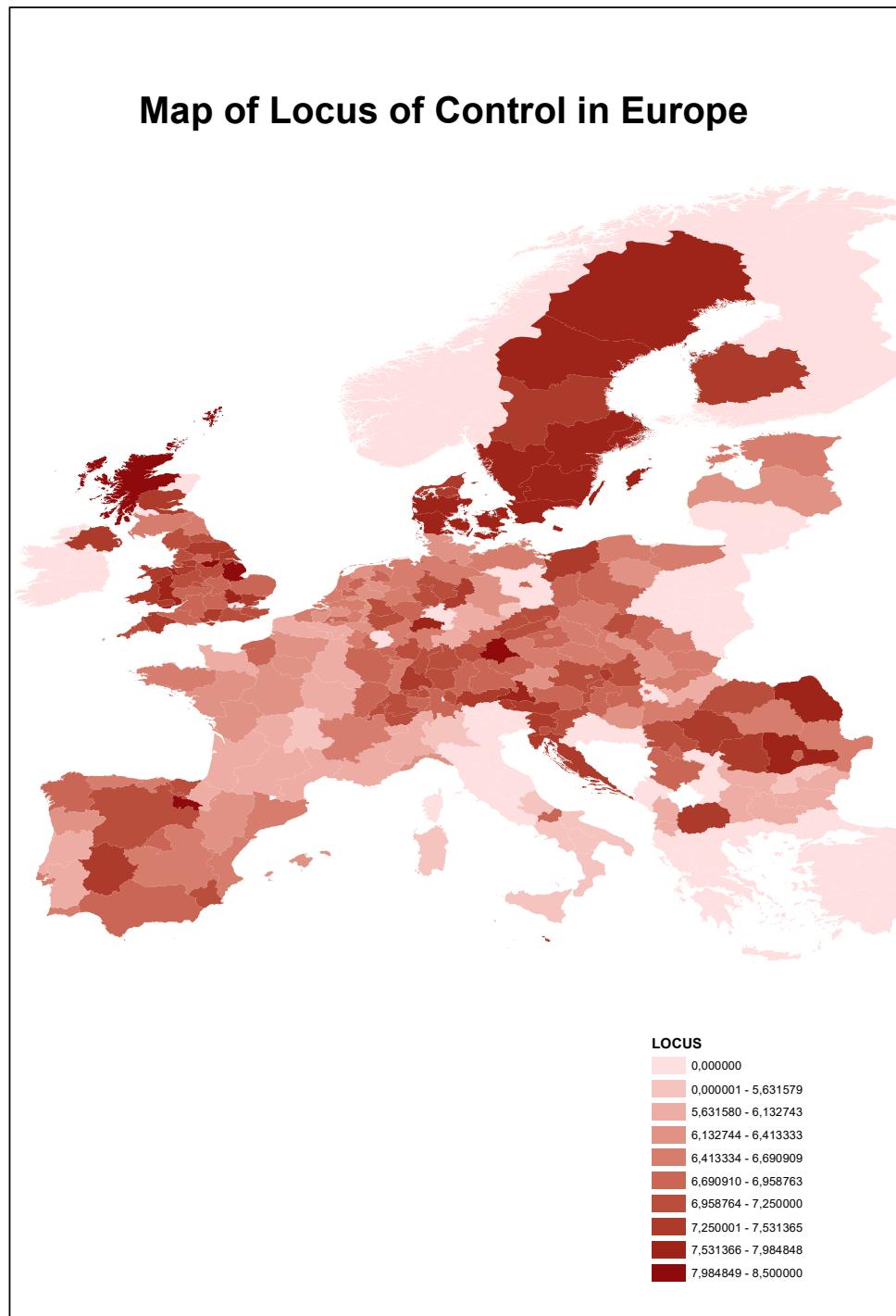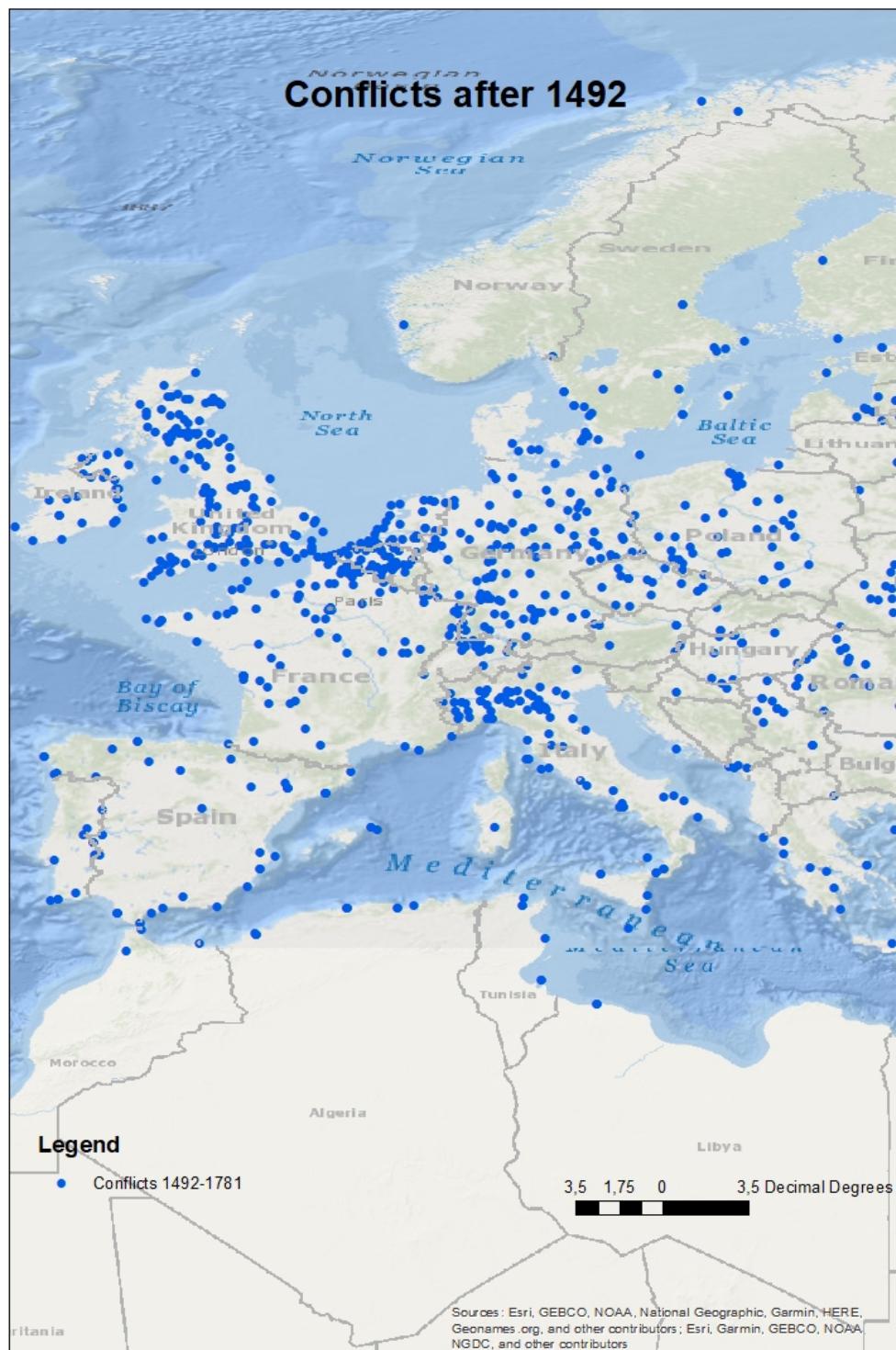
As Proust said, "We do not receive wisdom, we must discover it for ourselves, after a journey through the wilderness which no one else can make for us, which no one can spare us, for our wisdom is the point of view from which we come at last to regard the world. The lives that you admire, the attitudes that seem noble to you, have not been shaped by a paterfamilias or a schoolmaster, they have sprung from very different beginnings, having been influenced by evil or commonplace that prevailed round them. They represent a struggle and a victory." L'aventure n'en est qu'à ses débuts.

6 Appendixes

6.1 Figures

Map of Locus of Control in Europe

LOCUS

- 0,000000
- 0,000001 - 5,631579
- 5,631580 - 6,132743
- 6,132744 - 6,413333
- 6,413334 - 6,690909
- 6,690910 - 6,958763
- 6,958764 - 7,250000
- 7,250001 - 7,531365
- 7,531366 - 7,984848
- 7,984849 - 8,500000

Conflicts after 1492

Locus of Control and Border Change

coef = 3.9202862, se = 1.2250533, t = 3.2
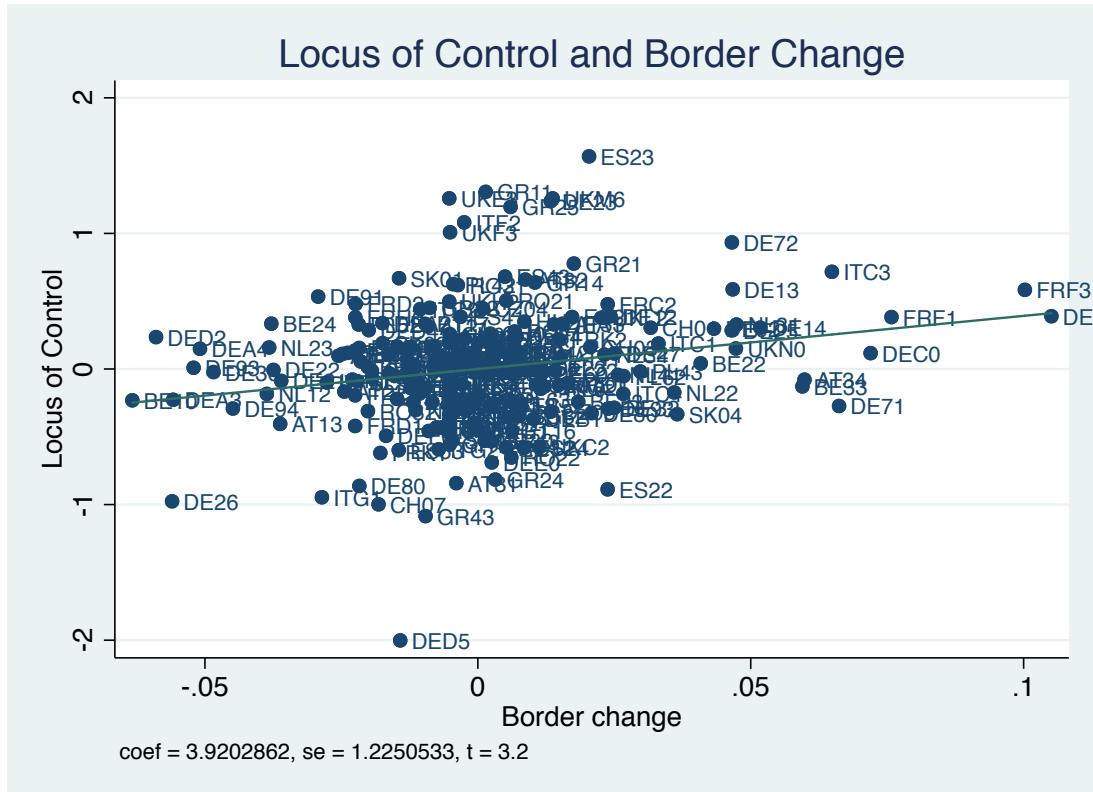
6.2 Tables

Table 1: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
LOCUS	242	6.758367	.6357627	4.737288	8.5
BORDER_CHANGE	241	.0368664	.0426973	0	.204031
WARS	242	9.006198	9.491258	0	64
MEAN_SUM_BORDERS	242	107.9086	140.1544	0	836.4334
DURATION_SOV	242	.5050334	.1970308	0	1
RIVERS	242	11.7987	12.89298	0	52.09265
POL_STATE_SOV	242	5.456077	1.62515	1.5	8.428571
POL_FRAG_SOV	242	5.591247	1.578601	1.5	8.857143
OZAK_SUITABILITY	242	1594.468	451.9845	171.5585	2691.216
ELEVATION	242	335.1435	336.4175	-3.727721	2089.174
GDP_CAPITA	242	96.78452	48.99786	23.82	611.1
LATITUDE	242	48.11418	5.27849	35.05008	59.4707
PRECIPITATION	242	792.1174	219.4878	344.0238	1628.222
TRADE_ROUTES	242	6.268761	16.64618	0	100

Table 2: Wars and Locus of Control

	Dependent variable							
	LOCUS (1)	LOCUS (2)	LOCUS (3)	LOCUS (4)	LOCUS (5)	LOCUS (6)	LOCUS (7)	LOCUS (8)
WARS	-0.00348	-0.00255	-0.00247	-0.00153	-0.00153	-0.00292	-0.00327	-0.00331
	(0.00375)	(0.00384)	(0.00385)	(0.00384)	(0.00385)	(0.00390)	(0.00388)	(0.00390)
RIVERS_DISTANCE		-0.00309	-0.00306	-0.00550*	-0.00547*	-0.00552*	-0.00532*	-0.00529*
		(0.00283)	(0.00284)	(0.00302)	(0.00303)	(0.00302)	(0.00300)	(0.00302)
OZAK_SUITABILITY			-3.59e-05	0.000155	0.000158	0.000195	0.000234*	0.000234*
			(0.000103)	(0.000134)	(0.000136)	(0.000136)	(0.000137)	(0.000137)
ELEVATION				0.000407**	0.000409**	0.000452**	0.000345*	0.000346*
				(0.000183)	(0.000184)	(0.000184)	(0.000192)	(0.000193)
GDP_CAPITA					-0.000122	-9.24e-05	-7.41e-05	-0.000119
					(0.000761)	(0.000756)	(0.000752)	(0.000812)
LATITUDE						0.0382*	0.0317	0.0319
						(0.0207)	(0.0209)	(0.0210)
PRECIPITATION							0.000404*	0.000406*
							(0.000214)	(0.000215)
TRADE_ROUTE								0.000326
								(0.00221)
Constant	6.023***	6.073***	6.143***	5.530***	5.525***	3.845***	3.646***	3.633***
	(0.327)	(0.330)	(0.388)	(0.473)	(0.475)	(1.027)	(1.026)	(1.032)
Observations	238	238	238	238	238	238	238	238
R-squared	0.535	0.538	0.538	0.549	0.549	0.556	0.564	0.564

*p<0.1; **p<0.05; ***p<0.01

Table 3: Border Change and Locus of Control

	Dependent variable							
	LOCUS (1)	LOCUS (2)	LOCUS (3)	LOCUS (4)	LOCUS (5)	LOCUS (6)	LOCUS (7)	LOCUS (8)
BORDER_CHANGE	4.197***	4.325***	4.306***	3.852***	3.851***	3.752***	3.458***	3.483***
	(1.244)	(1.244)	(1.250)	(1.264)	(1.268)	(1.259)	(1.285)	(1.298)
RIVERS_DISTANCE		-0.00395	-0.00392	-0.00575**	-0.00575**	-0.00606**	-0.00598**	-0.00602**
		(0.00270)	(0.00271)	(0.00286)	(0.00287)	(0.00285)	(0.00285)	(0.00287)
OZAK_SUITABILITY			-2.15e-05	0.000141	0.000141	0.000188	0.000213	0.000212
			(0.000101)	(0.000131)	(0.000133)	(0.000134)	(0.000135)	(0.000136)
ELEVATION				0.000352*	0.000352*	0.000426**	0.000367*	0.000364*
				(0.000183)	(0.000184)	(0.000186)	(0.000193)	(0.000194)
GDP_CAPITA					-1.38e-05	2.53e-05	2.81e-05	7.50e-05
					(0.000743)	(0.000737)	(0.000737)	(0.000798)
LATITUDE						0.0425**	0.0379*	0.0377*
						(0.0205)	(0.0208)	(0.0209)
PRECIPITATION							0.000244	0.000241
							(0.000215)	(0.000216)
TRADE_ROUTE								-0.000338
								(0.00218)
Constant	5.827***	5.894***	5.936***	5.431***	5.430***	3.530***	3.442***	3.456***
	(0.323)	(0.325)	(0.382)	(0.462)	(0.464)	(1.024)	(1.026)	(1.033)
Observations	237	237	237	237	237	237	237	237
R-squared	0.558	0.563	0.563	0.571	0.571	0.580	0.582	0.582

*p<0.1; **p<0.05; ***p<0.01

Table 4: Robustness checks

	Dependent variable			
	LOCUS	LOCUS	LOCUS	LOCUS
	(1)	(2)	(3)	(4)
BORDER_CHANGE	3.611***	3.643***	3.599***	3.625***
	(1.317)	(1.345)	(1.349)	(1.350)
SUM_BORDERS	-8.63e-05	-8.18e-05	-0.000104	-0.000117
	(0.000141)	(0.000147)	(0.000151)	(0.000152)
POL_FRAG		-0.00492	-0.0429	-0.0383
		(0.0408)	(0.0765)	(0.0766)
DIFF_STATE			0.0436	-0.0253
			(0.0741)	(0.101)
DURATION				0.604
				(0.597)
RIVERS_DISTANCE	-0.00565*	-0.00565*	-0.00529*	-0.00505*
	(0.00293)	(0.00294)	(0.00301)	(0.00302)
OZAK_SUITABILITY	0.000222	0.000219	0.000221	0.000196
	(0.000137)	(0.000140)	(0.000140)	(0.000142)
ELEVATION	0.000382*	0.000381*	0.000387*	0.000359*
	(0.000197)	(0.000198)	(0.000199)	(0.000201)
GDP_CAPITA	-8.29e-06	-1.01e-05	1.30e-05	9.67e-05
	(0.000811)	(0.000813)	(0.000815)	(0.000819)
LATITUDE	0.0391*	0.0391*	0.0391*	0.0354
	(0.0211)	(0.0211)	(0.0212)	(0.0215)
PRECIPITATION	0.000247	0.000247	0.000239	0.000257
	(0.000217)	(0.000217)	(0.000218)	(0.000219)
TRADE_ROUTE	-0.000352	-0.000352	-0.000333	-0.000502
	(0.00218)	(0.00219)	(0.00219)	(0.00220)
Constant	3.369***	3.398***	3.401***	3.633***
	(1.044)	(1.075)	(1.077)	(1.101)
Observations	237	237	237	237
R-squared	0.583	0.583	0.584	0.586

*p<0.1; **p<0.05; ***p<0.01

6.3 Construction of the variable "BORDER_CHANGE"

Interested in the long-lasting consequences of interstate competition in Europe, we started to think about one potential direct consequence of such phenomenon, namely border fluctuations. Relatedly, one may imagine that unstable borders embody one channel through which interstate competition could have had long-lasting effects on individuals' beliefs

To test this hypothesis, we build a measure of border change in Europe from 1000 to 1900. With ArcGis, I rasterize the ten polyline shapefiles corresponding to sovereign states borders in the related centuries. The unit of observation is a cell with sides 0.5 degrees latitude and longitude. Then, I get a binary raster by assigning 1 to cells with a border in a given century, and 0 otherwise. These binary rasters allow me finally to define the frequency with which cell i has switched between having a border and not having one, from 1000 to 1900, as:

$$\frac{1}{10} \sum (b_t - b_{t-1})^2$$

The European Value Study provides data on the locus of control at the NUTS 2 level. I therefore average the cells scores at the NUTS 2 regional level.

Bibliography and references

[1] Scott F Abramson. "The Economic Origins of the Territorial State". In: *International Organization* 71.1 (2017), pp. 97–130.

[2] Scott F. Abramson and David B. Carter. "The Historical Origins of Territorial Disputes". In: *American Political Science Review* 110.4 (Nov. 2016), pp. 675–698.

[3] Timothy Besley and Torsten Persson. "The Origins of State Capacity: Property Rights, Taxation, and Politics". In: *American Economic Review* 99.4 (Aug. 2009), pp. 1218–1244.

[4] Lisa Blaydes and Eric Chaney. "The Feudal Revolution and Europe's Rise: Political Divergence of the Christian West and the Muslim World before 1500 CE". In: *American Political Science Review* 107.1 (Feb. 2013), pp. 16–34.

[5] Sirus H Dehdari and Kai Gehring. "CESifo Working Paper no. 7410". In: (), p. 116.

[6] Mark Dincecco. "Fiscal Centralization, Limited Government, and Public Revenues in Europe, 1650–1913". In: (), p. 56.

[7] Mark Dincecco, Giovanni Federico, and Andrea Vindigni. "Warfare, Taxation, and Political Change: Evidence from the Italian Risorgimento". In: *The Journal of Economic History* 71.4 (Dec. 2011), pp. 887–914.

[8] Mark Dincecco and Massimiliano Gaetano Onorato. "Military conflict and the rise of urban Europe". In: *Journal of Economic Growth* 21.3 (Sept. 2016), pp. 259–282.

[9] B. Downing. *The Military Revolution and Political Change: Origins of Democracy and Autocracy in Early Modern Europe*. Princeton University Press.

[10] Nicola Gennaioli and Hans-Joachim Voth. "State Capacity and Military Conflict". In: *The Review of Economic Studies* 82.4 (Oct. 2015), pp. 1409–1448.

[11] Yuriy Gorodnichenko and Gerard Roland. *Culture, Institutions and Democratization*. w21117. Cambridge, MA: National Bureau of Economic Research, Apr. 2015, w21117.

[12] P. Hoffman. *Why Did Europe Conquer the World?* Princeton University Press.

[13] K. K. Karaman and Ş. Pamuk. "Different Paths to the Modern State in Europe: The Interaction Between Warfare, Economic Structure, and Political Regime". In: *American Political Science Review* 107.3 (2013), pp. 603–626.

[14] Jack S. Levy. "Historical Trends in Great Power War, 1495-1975". In: *International Studies Quarterly* 26.2 (June 1982), p. 278.

[15] Michael Mann. *The Sources of Social Power.* Cambridge University Press. 2012.

[16] Geoffrey Parker. "The "Military Revolution," 1560-1660–a Myth?" In: (), p. 21.

[17] Anne Rinn et al. "Locus of control, academic self-concept, and academic dishonesty among high ability college students". In: *Journal of the Scholarship of Teaching and Learning* (Aug. 1, 2014), pp. 88–114.

[18] Jean-Laurent Rosenthal and Roy Bin Wong. *Before and beyond divergence: the politics of economic change in China and Europe.* OCLC: ocn657223811. Cambridge, Mass: Harvard University Press, 2011. 276 pp. ISBN: 978-0-674-05791-3.

[19] Phillip H Ross. "Ancestral Roots of Locus of Control". In: (), p. 68.

[20] Enrico Spolaore and Romain Wacziarg. "War and Relatedness". In: *Review of Economics and Statistics* 98.5 (Dec. 2016), pp. 925–939.

[21] D. Stasavage. *States of Credit: Size, Power, and the Development of European Polities.* Princeton University Press.

[22] Charles Tilly. *The Formation of National States in Western Europe Princeton.* (Studies in Political Development). Princeton University Press, July 25, 1975. 711 pp.