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The State Origin of Obedience

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Keywords： Obedience, State history, Social norms, Cultural traits, Cultural transmission, Hierarchy.

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Abstract

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1. Introduction

A key aspect of hierarchical societies is the public's general consent to the (unequal) distribution of power, a social norm that shapes many aspects of modern lives. This study examines this deeply rooted social norm that varies significantly across societies: the extent to which one should (or is expected to) obey power regardless of one's own opinion. In some societies, people consider those with power to be superior. Obedience to the dictates of power is well justified and necessary to maintain social order and stability. In other societies, people hold a very different view: they believe that people are fundamentally equal, flat hierarchies are beneficial, and one should speak out when disagreeing with authority. The differences in such a norm among societies are well demonstrated in surveys reporting values and attitudes about obedience to power. For instance, sizable variations across countries are found in the World Values Survey and the European Values Survey on the the proportion of respondents that agree with the statement, "One should follow one's superior's instructions only when one is convinced that they are right," with countries such as Brazil, Bangladesh, and Venezuela show nearly 100% agreement, while some other countries show agreement less than 50% (for instance, the Dominican Republic).

The tendency of obedience to power can have profound consequences for a society, especially when power is abused. For instance, it is well noted that the "culture of obedience" played a crucial role in the Rwandan genocide in 1994: the Rwandans exhibited an extraordinarily high degree of obedience to the state's mobilization of killing (Straus, 2006). Heldring (2021) offered causal evidence for this observation, showing that the Rwandans who currently live in villages that were under centralized rule one century earlier show a significantly higher degree of obedience to dictates in a lab-in-the-field experiment. And these villages experienced a doubling of violence during the state-organized 1994 genocide. Moreover, when the government pursued peace before and after the genocide, the violence was lower in these villages.

Interestingly, in a similar anonymous resource allocation game setting implemented for residents living within and just outside the precolonial Kuba Kingdom in Central Africa, Lowes, Nunn, Robinson, and Weigel (2017) found that the historically developed and centralized state is associated with *less* rule following today, which the authors interpreted as evidential for motivational crowding out instead of motivational reinforcement that is found in Heldring (2021).[1] The drastically different experimental findings in Central Africa and Rwanda indicate that the relationship between state history and culture of obedience may be highly local and society-specific. A cross-country study on this matter is, therefore, useful for drawing a big picture and assisting further research.

Motivated by Lowes, Nunn, Robinson, and Weigel (2017) and Heldring (2021), this paper explores the cross-society differences in centralized state history and the tendency of obedience to

[1] Lowes et al. (2017) illustrated the mechanism through the model developed in Tabellini (2008): "...if institutions become better at ensuring that bad children behave like good children, then parents reduce their investments aimed at making sure their child is a good type. Since parents only care about the actions of their children, not their preferences per se, the benefit of exerting effort to inculcate an intrinsic dislike for cheating is lower with better state enforcement."

power in modern times. We combine measures of state history, proposed by Bockstette, Chanda, and Putterman (2002) and Borcan, Olsson, and Putterman (2018), with contemporary measures of individuals' tendency or expectation of obedience both at the workplace and within the family, as well as measures of behavior against power such as protest experiences and attitudes towards gender inequality. We find a robust positive relationship between historical centralized statehood and individuals' obedience to power today, even when an exhaustive set of societal and individual observable characteristics is controlled. This finding echoes the view in political science that the state is the "enemy of autonomy" that "attempts to control the population" and "encroaches on local practices and forms of self-governance" to "ensure long-term compliance and control" (Scott, 1998). The classical work of sociologists, such as Michel Foucault on the prison system and Max Weber on the bureaucratic authority, also explored nuanced ways centralized states request, cultivate, and educate obedience. (Foucault, 1975; Weber, 1978).

This finding, though supports the view of these scholars, does not by itself exclude other explanations. For instance, we would observe the same patterns if hierarchical states were more likely to form in intrinsically more obedient societies: a typical reverse causality problem. Also, individuals' tendency to obey may well be instrumentally rational responses to social institutions or government policies rather than internalized cultural traits. Establishing causality from statehood to obedience broadly and beyond local environments is, therefore, a challenging task.

Identification Although a foolproof identification may be impossible for the matter being studied, we pursue identification in various independent ways that we believe, put together, offer strong support for the argument that centralized statehood fostered the culture of obedience.

We first implement an instrumental variable regression design following the OLS regressions. The instruments we employ for state history are the state's within-year climate seasonality, which bases on the theory from anthropology and archaeology that the within-year climate (temperature and precipitation) seasonality facilitated the building of complex hierarchies and tax-levying states through incentivizing the adoption of a sedentary lifestyle and food storage for insurance against scarcity (Smith, 1995; Matranga, 2024). Consistent with this argument, we find that within-year climate seasonality strongly correlates with the measures of state history. And in support of our story, the instrumented state history reserves significance in explaining the obedience of modern people. Results from instrumental variable regressions support the notion that state history shapes, rather than being shaped by, the norm of obedience. To alleviate concerns about the exclusion restriction, that climate seasonality may influence obedience through channels other than statehood, such as the development of local religions, political institutions, or economic development, we conduct a series of robustness checks by including additional controls. Our results are robust to the inclusion of these controls.

Our second strategy controls for country fixed effects by zooming into sub-samples. Specifically, we explore the variation of obedience among second-generation immigrants who were born in the United States, Europe, Canada, Australia, and New Zealand. This allows us to control for

the fixed effects of the country in which they live, thus removing confounding factors such as the political system, the rule of law, government policies, school or job market environments, etc. In fact, this strategy allows us to compare individuals who almost only differ in cultural heritage that is transmitted within the family.[2] We find that individuals whose parents are from societies with longer and more centralized state histories show both higher expectations of obedience for their children and a higher tendency of obedience to their bosses in the workplace. A potential threat to this strategy is the self-selection of emigration. Particularly, our results will be contaminated if emigrants out of countries with longer state histories are more obedient compared to non-emigrating residents. We do not find such a pattern in the data. Moreover, the results remain robust when we control for other political characteristics of the parents' countries of origin.

Our third strategy takes advantage of the sudden dissolution of the Soviet Union in the 1990s–arguably the largest natural experiment in recent history for studying the social-psychological effects of a highly centralized state system. We implement a cohort difference-in-differences methodology to examine whether experiencing adolescence before the Soviet collapse affects an individual's level of obedience. We find evidence in support of this effect: individuals in European countries who went through adolescence in the Soviet Union during their formative years report higher levels of obedience–both within the family and in the workplace–compared to other cohorts in the same country, using other European countries as a control group. This analysis further strengthens our argument that a highly centralized system of power can shape individuals' attitudes toward authority and obedience. We also conduct an event study approach to investigate the dynamic effect of the Soviet Union on individuals' obedience levels. We find the effect is more pronounced below age 20 for the obedience level in the family, while the effect is more pronounced above 20 for the obedience level in the workplace.

As a fourth strategy to strengthen our argument, we examine the effect of state history on two additional measures related to obedience: the propensity to participate in protests and attitudes towards gender inequality. Our hypothesis is that state history shall also have effects on these two norms that are closely related to obedience, as a culture of obedience discourages defiance against authority or the spirit of equality. We apply the above three identification strategies and confirm the existence of such a connection: people who live in long-standing countries also tend to participate in protests less and agree more with the statement that men and women are by nature unequal.

Channel Analyses Having established a causal link from centralized state history to modern obedience, we now investigate how this norm is transmitted and persists. If obedience is culturally ingrained, we should find its imprint in the durable cultural infrastructure of society. We explore two such long-term carriers—folk narratives and linguistic structures—which subtly encode and transmit social norms across generations. Conversely, if this transmission operates through the

[2]Such a strategy is also employed in other research to identify the causation in cultural transmission. See Alesina, Giuliano, and Nunn (2011, 2013); Hansen, Jensen, and Skovsgaard (2015); Enke (2019).

availability of information, exposure to alternative ideas in the modern era should weaken the historical influence. We test this by examining the mediating role of internet access. Together, these analyses move beyond establishing the fact of persistence to shed light on the processes of cultural transmission and change.

Firstly, we document that centralized state history leaves observable cultural footprints in literary stories that reflect a tendency or expectation for obedience. To show this, we rely on the folklore data created by Yuri Berezkin and introduced to economic studies by Michalopoulos and Xue (2021), which contains the presence of 2,564 folklore motifs spanning about 1,000 societies. We aggregate them at the level of contemporary countries and find that those with longer centralized state histories have a higher proportion of motifs related to both obedience and punishment associated with disobedience, indicating a word-of-mouth channel through which social norms are transmitted. A similar pattern is also found in linguistic traits retrieved from The World Atlas of Language Structures (WALS), the most comprehensive database of phonological, grammatical, and lexical properties of languages. We focus on politeness distinctions in pronouns (e.g., "tu" and "used" in Spanish, "du" and "Sie" in German, etc.) that arguably reflect the social class distinctions. We also confirm a positive relationship between state history and the extent of politeness distinctions in pronouns in languages. These cultural footprints, though they do not directly indicate the direction of causation, reveal nuanced ways in which the tendency of obedience is shaped and transmitted across generations.

We proceed with our analysis by exploring information shocks in modern times that can help build causation. Specifically, we ask whether the free flow of information and ideas through internet connections helps mitigate traditional social norms that were shaped by history. We hypothesize that exposure to the internet during adolescence, a critical period of value formation, can weaken the influence of traditional values inherited partly from state history. We construct a country-by-cohort index of mobile internet coverage from Collins Bartholomew Mobile Coverage Explorer following Guriev, Melnikov, and Zhuravskaya (2021). Our finding indicates that individuals with more access to the Internet during adolescence show a weaker influence of state history on the level of obedience today when both country-by-year and cohort fixed effects are controlled. Additionally, such a mediating effect of the Internet is only significant in countries where the Internet is not censored by the government. These results reveal how an open environment and the free flow of information in modern societies reshape people's traditional attitudes and beliefs.

Literature The idea that history has persistent effects on modern social norms is not new. Previous literature has linked historical statehood, hierarchy, and institutional arrangements to various dimensions of social norms, such as trust and cooperation (Cassar, d'Adda, and Grosjean, 2014; Grosjean, 2011; Tabellini, 2010), market-government preferences (Alesina and Fuchs-Schündeln, 2007), and rule-following tendencies (Lowes, Nunn, Robinson, and Weigel, 2017; Heldring, 2021; Rozenas, Talibova, and Zhukov, 2024). In closely related literature, other historical roots of contemporary social norms, such as geography, technology, or certain historical events, also receive

quite some attention (Alesina, Giuliano, and Nunn, 2013; Ashraf and Galor, 2013; Becker, Enke, and Falk, 2020; Cao, Enke, Falk, Giuliano, and Nunn, 2021; Fiszbein, Jung, and Vollrath, 2022; Galor and Michalopoulos, 2012; Galor, Özak, and Sarid, 2018; Giuliano and Nunn, 2021; Ochsner and Roesel, 2024). This paper studies the role of state history in shaping the culture of obedience, which we believe is an important but relatively under-explored aspect of social norms. As is the case for other social norms, a key question being asked is whether the historical state regime reinforced or crowded out the ideas or norms the state intended to promote. Previous studies related to this topic focus on the local effects, relying on designs such as regression discontinuity on historical state or state capital borders, and sometimes generate seemingly conflicting results (Lowes, Nunn, Robinson, and Weigel, 2017; Heldring, 2021). Our paper contributes to this discussion by extending the analysis to a broader set of societies. We find a general pattern that historical statehood and hierarchy foster/reinforce the culture of obedience, which is persistent and still observable in modern people. Focusing on non-local effects also enables us to link state history to observable cultural footprints in folklore motifs and linguistic features that help examine the channels through which the culture is transmitted.

Despite the abundant literature on the causes and consequences of cultural traits such as individualism/collectivism (Gorodnichenko and Roland, 2017; Bian, Li, Xu, and Foutz, 2022), the discussion on obedience remains a small literature in economics. In Hofstede's cultural dimensions theory, the culture of obedience (power distance) is an important trait that is closely related to collectivism. In addition to the obvious importance in the case of power abuse, as is revealed in Akerlof (1991) and recently in Heldring (2020, 2021), obedience reflects a particular dimension of social norms that can shape the organization of modern lives in many other dimensions. For instance, Campante and Chor (2010, 2017) discussed the potential effects of obedience tendency for human capital accumulation, patterns for specialization, and productivity. Acemoglu (2022) proposed that obedience/independence, as a value system families impart to their children in response to labor market environments, can further shape political participation and social mobility. Micro theorists, such as Van den Steen (2010) and Rantakari (2025), explored the implications of voluntary obedience in the context of firm theory and organizational production. In this paper, we offer evidence that obedience, transmitted within and outside families, has its origin in statehood. While mainly focusing on exploring the historical origin of obedience, this paper also offers evidence that obedience is related to protest participation and perceptions of gender inequality, which suggests the role of obedience outside extreme and crisis periods in modern societies.

Our analysis further connects to the broad literature on the formation and transmission of social norms, particularly highlighting the role of available information. On the one hand, social norms are reflected in various cultural information carriers. Studying these carriers, such as language, writing, rituals, and religion, is an important approach to studying social norms (Michalopoulos and Xue, 2021). On the other hand, one can explore information shocks (in observational studies) or design information treatments (in intervention studies) to gain valuable insights into social norms (Guriev, Melnikov, and Zhuravskaya, 2021). We contribute to this lit-

erature by (1) documenting that observable cultural footprints of obedience correlate with state history and (2) showing that free access to external information via the Internet mitigated the effects of state history on obedience.

Finally, this paper rests naturally in the cross-cultural studies of social norms. This literature highlights the systematic cross-society differences in social norms and tries to understand the factors that shape these differences. Running standard economic games (e.g., the Ultimatum Game) in different societies, this literature finds sizable variation in the in-game behavior of people from different institutional and cultural backgrounds (Henrich, Boyd, Bowles, Camerer, Fehr, Gintis, and McElreath, 2001; Henrich, Heine, and Norenzayan, 2010; Bauer, Blattman, Chytilová, Henrich, Miguel, and Mitts, 2016; Schulz, Bahrami-Rad, Beauchamp, and Henrich, 2019). We share the basic spirit of this literature and contribute to it by providing evidence that statehood history is a factor in shaping cross-society cultural differences. In addition, this study provides an example where observational data can be used to zoom out and complement experimental data, especially in cases where local experimental data offer conflicting results.

The rest of the paper is organized as follows. We first outline and summarize the data we use in Section 2. In Section 3, we present our main results as follows. Section 3.1 documents the cross-country correlation between state history and the norm of obedience. Section 3.2 shows results using the instrumental variable approach. Section 3.3 shows results from second-generation immigrants that we believe offer the strongest identification. Section 3.4 shows results using the sudden dissolution of the Soviet Union as a natural experiment that aims to strengthen the identification from an independent source. Section 3.5 shows results with alternative outcomes, protest inclination, and gender role perception, which relate to obedience. We explore the channels through which state history shapes the culture of obedience in Section 4, with an emphasis on the role of available information to society, including folklore (Section 4.1), linguistics (Section 4.2) and free access to Internet (Section 4.3). Section 5 concludes.

2. Data

This section describes the data used in our study. We start by presenting measures of state history. Next, we show how we constructed obedience measures using the World Values Survey (WVS) and European Values Survey (EVS) data. We also briefly sketch country covariates used for subsequent analyses. In the main text of this section, we present the full sample data for establishing the cross-country correlation. Summary statistics for each specific identification setting are included in the Appendix.

2.1. Measures of State History

Our measures of state history closely follow the widely adopted indices constructed in Bockstette et al. (2002) and extended in Borcan et al. (2018). Specifically, we use two proxies for state

history for each contemporary country: a measure of the length of statehood existence (*State Age*) and an index trying to capture not only state length but also some aspects of the political structure (*Centralized Statehood Index*). *State Age* is calculated as the years of the duration for any state-level institutions from 3500 BCE until 2000 CE, and we use its logarithmic form to reduce skewness in all specifications. *Centralized Statehood Index* is an integral measure of the state history, reflecting the duration of statehood existence, hierarchical complexity, and influential coverage range. The centralized statehood index was the preferred measure for state history in Bockstette et al. (2002) and Borcan et al. (2018). They coded the characteristics of territories conforming to the boundaries of present-day countries at 50-year intervals from 3500 BCE to 2000 CE. For each interval, they first coded three sub-scores: (a) z_1: whether there exists a government above the tribal level. 0 if no, 0.75 if at best a paramount chiefdom, 1 if yes; (b) z_2: whether that government was indigenous or externally exposed. 0.5 if externally based, 0.75 if local with foreign oversight, 1 if local; and (c) z_3: how large the government covered the proportion of the territory today. 1 if over 50%, 0.75 if 25-50%, 0.5 if 10-25%, 0.3 if under 10%. The *Centralized Statehood Index* is then computed for each contemporary country as follows.

$$\frac{\sum_{g=1}^{110} 50 z_1 z_2 z_3 (1-\alpha)^g}{\sum_{g=1}^{110} 50 (1-\alpha)^g} \tag{1}$$

where g is the number of 50-year intervals from now and α is a discount factor to allow farther periods have smaller weights[3]. In the balanced sample, respondents come from 100 distinct countries. See Panel A of Table 1 for the summary statistics. The two measures, *State Age* and *Centralized Statehood Index*, are strongly correlated with a correlation coefficient of 0.91.

2.2. *Measures of Obedience*

Our main measures of obedience come from the World Values Survey (WVS) and the European Values Survey (EVS). WVS and EVS are two widely used cross-national surveys in social sciences and perhaps the only sources for consistent measures of social norms and values across a large body of contemporary countries. There are several additional advantages to use WVS and EVS for our purposes: i) Since the emergence in the early 1980s, there have already been five waves of EVS and seven waves of WVS, covering an approximately 40-year period (1981-2022) for more than 120 societies. ii) Cover comprehensive thematic topics and interview questions related to the social, political, economic, religious, and cultural values of people worldwide. iii) The design of question variables is mostly consistent across different waves and the WVS and EVS. We therefore combine all the waves to create a consolidated dataset.

We mainly focus on two questions that are most relevant to individuals' obedience expectations and/or behavior. The first question is, "Do you consider obedience to be an important quality that children can be encouraged to learn at home?". Respondents can check "important" or

[3]In all our specifications, the discount rate is $\alpha = 1\%$. Our results are robust to alternative discount rates (e.g., 0.1% and 2%). See Appendix Table C11.

Table 1: Summary Statistics

	N	Mean	SD	Min	Medium	Max
Panel A: State History Measures						
Log State Age	100	7.191	0.924	4.605	7.423	8.613
Centralized Statehood Index	100	0.271	0.168	0.020	0.260	0.743
Panel B: Instrumental Variable						
Temperature Seasonality	77	10.308	6.984	0.003	10.257	28.039
Precipitation Seasonality	77	1.282	0.635	0.268	1.236	3.120
Panel C: Individual Compliance Outcomes						
Family Obedience	519,263	0.349	0.477	0.000	0.000	1.000
Workplace Obedience	224,286	0.348	0.476	0.000	0.000	1.000
Protest	496,837	0.469	0.390	0.000	0.500	1.000
Men Enjoy More Rights	515,494	1.842	0.907	1.000	1.000	3.000
Men Being Better Executive	264,163	2.264	0.960	1.000	2.000	4.000
Panel D: Individual Covariates						
Female	519,263	0.529	0.499	0.000	1.000	1.000
Age	519,263	43.071	16.504	18.000	41.000	82.000
Married	519,263	0.630	0.483	0.000	1.000	1.000
Employed	519,263	0.443	0.497	0.000	0.000	1.000
Number of Children	519,263	1.747	1.503	0.000	2.000	8.000
Panel E: Country and Country-by-Year Covariates						
Ethnic Fractionalization	100	0.392	0.242	0.002	0.387	0.930
Land Area (in $10^5 km^2$)	100	10.850	24.611	0.007	2.839	163.805
Average Precipitation in Depth (mm per year)	100	1,019.493	690.600	18.100	768.000	3,114.400
Population Density	361	181.720	657.784	2.093	88.109	7,844.408
GDP	361	119,931.772	907,600.621	0.028	938.674	1.442e+07
FDI, net (in billion, current US$)	361	0.289	24.610	-180.368	-0.749	154.206
Rule of Law Index	361	0.683	0.295	0.018	0.770	0.999

Notes: This table shows the summary statistics of basic country-level and individual-level variables. Panel A includes two state history measures. Panel B includes two instrumental variables of seasonality. Panels C and D include individual-level compliance-related variables and a series of individual characteristics. Panel E includes both time-invariant and time-variant country variables, which are included in the specifications of Section 3.1.

leave it blank, which suggests "not important". We create a dummy equal to 1 if the respondent reported obedience as "important." The second question is, "People have different ideas about following instructions at work. Some say that one should follow one's superior's instructions even when one does not fully agree with them. Others say that one should follow one's superior's instructions only when one is convinced that they are right. With which of these two opinions do you agree? Follow instructions / Depends / Must be convinced first." We coded a binary variable that is equal to one if respondents would unconditionally "follow instructions" or are uncertain about their behavior, and to zero if respondents reported they "must be convinced first." The two obedience measures capture related but also different aspects of the culture of obedience. The first one is asked in the context of family education, and the responses are representative of parents who play a superior role (expectation of obedience). The second one is asked under the context of the workplace, and the responses are representative of employees who play an inferior role (tendency of obedience). Collapsing the two measures to the country level, obedience within the family and the workplace is positively correlated but intrinsically distinct (correlation is 0.43). Within a country, obedience shows persistence. Computing the average obedience level for every ten years for each country, the correlation between countries' 1980-1990 obedience and 2010-2022 obedience is 0.62. The summary statistics of compliance outcomes are reported in Panel C of Table 1. The family obedience variable is available in four EVS waves and six WVS waves, while the workplace obedience variable is only available in three EVS waves and three WVS waves; therefore, it has fewer observations. In all the analyses with individual-level specifications, we include a set of personal demographics and characteristics, including gender, marital and employment status, age, and number of children. The summary statistics are reported in Panel D of Table 1.

2.3. Country Covariates

In the cross-country correlation analysis, we exhaustively control a series of geographic, economic, and political factors that may be related to the state history. Geographic factors include land area and average precipitation in depth. Economic factors include GDP estimates by the World Bank, population density, and net foreign direct investment, which all come from the World Bank Development Indicators. In terms of political institutions, we include the rule of law index[4] from the V-Dem[5] dataset. We also include the ethnic fractionalization index, which comes from Gerring and Knutsen (2022). For the time-varying country variables (population density, GDP, FDI, and rule of law), we calculate the five-year average (including two years before and after) to smooth out annual fluctuations. The summary statistics are shown in Panel E of Table 1.

Panel B includes two instrumental variables for the state history: temperature seasonality and precipitation seasonality, with data borrowed from Matranga (2024). We will discuss the construction and validity for instrumental variables in Section 3.2.

[4]The rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

[5]https://v-dem.net/.

3. State History and Obedience

3.1. Cross-Country Suggestive Evidence

We start our analysis by looking into the cross-country correlation between state history and the measures of obedience. Specifically, we estimate the following Equation 2:

$$Obedience_{ijct} = \alpha + \beta_1 StateHistory_j + \mathbf{X_i'}\gamma + \mathbf{C_j'}\zeta + \lambda_{ct} + \epsilon_{ijct} \quad (2)$$

where i denotes the individual, currently living in country j (in continent c) and interviewed in year t. Obedience outcomes include family obedience and workplace obedience. $StateHistory_j$ include two measures: *Log State Age* and *Centralized Statehood Index*. λ_{ct} denotes the continent-by-year fixed effects, controlling for time-variant continent differences. $\mathbf{X_i'}$ denotes individual-level demographics, including gender, age, marital status, employment status, and number of children. Although Section 3.1 is not meant for establishing causation, we control for various country-level covariates that may be correlated with state history and affect social norms through other channels. These covariates are denoted as $\mathbf{C_j'}$, including economic factors (World Bank GDP estimate, population density, and net foreign direct investment), political factors (rule of law index), geographical factors (land area and average precipitation in depth), and ethnic fractionalization.

The OLS regression estimates of Equation 2 are reported in Table 2. Columns 1-3 use the *Log State Age* as the independent variable, and columns 4-6 use the *Centralized Statehood Index* instead. Columns 1 and 4 only control for continent-by-year fixed effects. Columns 2 and 5 additionally control for individual-level characteristics. Columns 3 and 6 further control for country-level covariates. Across most specifications, we observe a positive relationship between state history and obedience, both in the family (Panel A) and in the workplace (Panel B). Individuals with the 90th percentile *Centralized Statehood Index* (0.44) are 4.7 percent points more likely to perceive obedience as an important trait in family education and 1.6 percent points more likely to follow instructions at work regardless of his/her own opinion, compared to their counterparts with the 10th percentile score (0.09). Given that, on average, 20% of respondents report obedience as an important family trait and 32% exhibit workplace obedience, these effects of state history are quantitatively non-trivial.

Robustness checks on different versions of state history: For a robustness check, we consider the sensitivity of the state history measures. State history might partially account for the variance in contemporary institutions, as it contains information up to 2000. We truncate the state history period to an earlier era to reduce this concern. Specifically, we use state history during the periods 3500 BCE to 1 CE and 3500 BCE to 1500 BCE as the independent variables instead. Since these periods are so far away from the present, it is unlikely that any ancient state institutions from then will still exist today. Results in the Appendix Table C2 show that when alternating with much earlier versions of state history measures, the coefficients are of a similar magnitude. As a second practice, we also alternate with different discount rates (0.1% and 2%) when constructing the

Table 2: Effects of State History on Obedience: OLS

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Dependent Variable - Family Obedience						
Log State Age	0.048***	0.043***	0.031***			
	(0.001)	(0.001)	(0.001)			
Centralized Statehood Index				0.134***	0.126***	0.132***
				(0.005)	(0.005)	(0.006)
Continent × Survey Year FE	✓	✓	✓	✓	✓	✓
Individual Controls		✓	✓		✓	✓
Country Controls			✓			✓
Observations	620,048	587,823	519,263	620,048	587,823	519,263
# Unique Birth Countries	105	104	100	105	104	100
Panel B: Dependent Variable - Workplace Obedience						
Log State Age	-0.002	-0.001	0.009***			
	(0.002)	(0.002)	(0.002)			
Centralized Statehood Index				0.039***	0.036***	0.045***
				(0.008)	(0.008)	(0.010)
Continent × Survey Year FE	✓	✓	✓	✓	✓	✓
Individual Controls		✓	✓		✓	✓
Country Controls			✓			✓
Observations	281,189	271,156	224,286	281,189	271,156	224,286
# Unique Birth Countries	76	76	72	76	76	72

Notes: This table presents the effect of state history on obedience, either within the family or the workplace. Individual-level controls include gender, age, marital status, employment status, and number of children. Country-level controls include World Bank GDP estimate, population density, net foreign direct investment, land area, average precipitation in-depth, rule of law index, and ethnic fractionalization. Standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Centralized Statehood Index and find the results are robust to different discount rates (see Appendix Table C3).

3.2. *An Instrumental Variable Estimation*

Starting from Section 3.2, we take steps to build causation from state history to the culture of obedience. As a first step, we adopt an instrumental variable (IV) strategy. The interpretation for the positive relationship between state history and obedience shown in Section 3.1 suffers from the reverse causality problem: complicated hierarchical political institutions are more likely to be established in places where social norms favor obedience to power more. To relieve this concern, we instrument the state history by the within-year climate seasonality of the country, which is viewed as one of the key drivers to the invention/adoption of agriculture (Smith, 1995). Specifically, the temperature and precipitation seasonality incentivized the adoption of a sedentary lifestyle and food storage for insurance against scarcity, which facilitated the building of complex hierarchies and tax-levying states. We borrow the seasonality indices constructed by Matranga (2024), which are measured at a grid level, and collapse them to the country level by taking the simple mean of the cells within the countries' boundaries.[6]

The 2SLS regression estimates are reported in Table 3. Panel A reports the second-stage regression results, where the outcome variable is family obedience in columns 1-3 and workplace obedience in columns 4-6. Columns 1-2 and 4-5 show the 2SLS estimates, and we show results using either $LogStateAge$ as the dependent variable or $CentralizedStatehoodIndex$. Columns 3 and 6 show the RF estimates, where we directly regress the outcome variable on the temperature and precipitation seasonality measures. In all specifications, we control for the interaction of continent and year fixed effects, individual characteristics, and country controls, which are the same as in Section 3.1. We can observe a consistent positive relationship between the state history and the obedience levels. The magnitude of the estimates is larger than the OLS estimates. Panel B reports the corresponding first-stage estimates.[7] It can be seen that both temperature and precipitation seasonality are strongly correlated with the measures of state histories. F-statistics are reported in the table as well.

Inclusion of additional controls. A critical concern of this strategy is that seasonality may contribute to obedience through channels other than statehood, such as religion, institutions, or economic development. Instead of arguing for clean satisfaction of the exclusion restriction, we claim that our strategy is immune to the inclusion of an exhaustive set of controls that reflect the above channels. Specifically, we add a series of additional controls, such as personal religiosity or praying frequency, and different measures of political institutional quality. Results from this robust-

[6]The data of grid-level seasonality is directly from Matranga (2024), where the temperature seasonality is constructed as $TempSeas = max(Temp.Warmest, 0) - max(Temp.Coldest, 0)$ and precipitation seasonality is constructed as $PrecipSeas = \frac{Precip.Wettest - Precip.Driest}{MeanPrecip.}$.

[7]The first stage estimation on the country level obtains similar results (see Appendix Table C4).

Table 3: Effects of State History on Obedience: 2SLS

	Family Obedience			Workplace Obedience		
	2SLS		RF	2SLS		RF
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Second Stage						
Log State Age	0.175***			0.040***		
	(0.003)			(0.004)		
Centralized Statehood Index		0.801***			0.191***	
		(0.015)			(0.019)	
Temperature Seasonality			0.005***			0.003***
			(0.000)			(0.000)
Prescription Seasonality			0.127***			0.023***
			(0.002)			(0.004)
Continent × Year FE	✓	✓	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓	✓	✓
Country Controls	✓	✓	✓	✓	✓	✓
Observations	414,804	414,804	414,804	182,468	182,468	182,468
# Unique Birth Countries	77	77	77	77	77	77
Panel B: First Stage						
	Log State Age	Centralized Statehood Index		Log State Age	Centralized Statehood Index	
Temperature Seasonality	0.054***	0.011***		0.067***	0.014***	
	(0.000)	(0.000)		(0.000)	(0.000)	
Precipitation Seasonality	0.378***	0.100***		0.512***	0.110***	
	(0.003)	(0.001)		(0.003)	(0.001)	
F statistics	41,662.414	45,785.5		45,885.803	43,099.6	
Continent × Year FE	✓	✓		✓	✓	
Individual Controls	✓	✓		✓	✓	
Country Controls	✓	✓		✓	✓	
Observations	414,804	414,804		182,468	182,468	

Notes: This table presents the effect of state history on obedience, either within the family or the workplace. Individual-level controls include gender, age, marital status, employment status, and number of children. Country-level controls include World Bank GDP estimate, population density, net foreign direct investment, land area, average precipitation in-depth, rule of law index, and ethnic fractionalization. Standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

ness check are displayed in Table 4. Coefficients of the state age are basically unchanged after adding additional controls, indicating the robustness of the cultural transmission channel to the inclusion of other potential channels. The coefficients of religiosity are positive, indicating that more religious people tend to be more obedient. Measures on institutions are generally negative, indicating a negative relationship between institutional quality and obedience. This confirms the idea of complementarity between administrative quality and the needs of obedience reflected in (Lowes et al., 2017)'s work. The coefficient of income inequality, as measured by the Gini index, is positive, indicating that the norm of obedience is more prevalent in societies with more inequality.

Robustness checks on different versions of state history. We repeat the robustness check under this setting by alternating different versions of state history via changing the time range covered and discount rates. Results are displayed in Appendix Table C5 and Table C6.

Table 4: Effects of State History on Family Obedience: IV Estimates, More Controls

Additional Controls	(1) Religious	(2) Pray Frequency	(3) Gov. Effectiveness	(4) Control of Corruption	(5) Political Stability	(6) Voice Accountability	(7) Regulatory Quality	(8) Gini Index	(9) All
Panel A: Independent Variable: Log State Age									
Log State Age	0.186***	0.195***	0.137***	0.153***	0.136***	0.196***	0.161***	0.187***	0.113***
	(0.006)	(0.006)	(0.006)	(0.007)	(0.008)	(0.006)	(0.006)	(0.008)	(0.009)
Panel B: Independent Variable: Centralized Statehood Index									
Centralized Statehood Index	0.779***	0.816***	0.604***	0.622***	0.626***	0.830***	0.706***	0.753***	0.444***
	(0.026)	(0.026)	(0.024)	(0.026)	(0.036)	(0.026)	(0.025)	(0.030)	(0.036)
Continent × Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Contry Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Observations	243,266	243,266	243,266	243,266	243,266	243,266	243,266	243,266	243,266
# Unique Birth Countries	64	64	64	64	64	64	64	64	64

Notes: This table displays the effects of state history on obedience. Individual-level controls include gender, age, marital status, employment status, and number of children. Country-level controls include World Bank GDP estimate, population density, net foreign direct investment, land area, average precipitation in-depth, rule of law index, and ethnic fractionalization. Standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

3.3. *Second Generation Immigrants*

We now introduce our second identification strategy to address potential confounding factors. While persistent cultural influence may explain the positive correlation between state history and obedience norms, centralized states could also foster compliance through formal institutions, persistent policies, and other state-shaped market and non-market environments. The above IV strategy may not exhaust all these potential confounding channels. To isolate the effect of culture from these factors, we analyze a distinct sample: the domestically born children of immigrants who were from various cultural backgrounds. This approach leverages two key features: (1) Immigrants transmit their cultural heritage to their children, and (2) these children grow up in the same institutional environment (schools, laws, markets, etc). Ideally, these children differ only in the cultural exposure carried over by their parents. By comparing children of immigrants from different ancestral backgrounds within the same host country and year (via country-by-year fixed effects), we effectively hold institutional influences constant. This allows us to isolate variation in cultural norms linked to ancestral state history.

In the combined WVS-EVS dataset, we identify individuals who satisfy two criteria: i) whose parents are immigrants and ii) who are born and raised in European countries, the United States, Canada, Australia, and New Zealand, which are the typical immigrant countries. These second-generation immigrants are supposed to grow up in similar external environments, but their cultural heritage varies. Since information on the immigrant status and birth countries of individuals and their parents is only available in WVS wave 7 (2017-2021) and EVS wave 4-5 (2009-2010 and 2017-2021), we end up with 5,085 individuals from 46 countries and 102 distinct ancestral countries. Appendix Table C7 shows the summary statistics of the constructed second-generation immigrants sample.

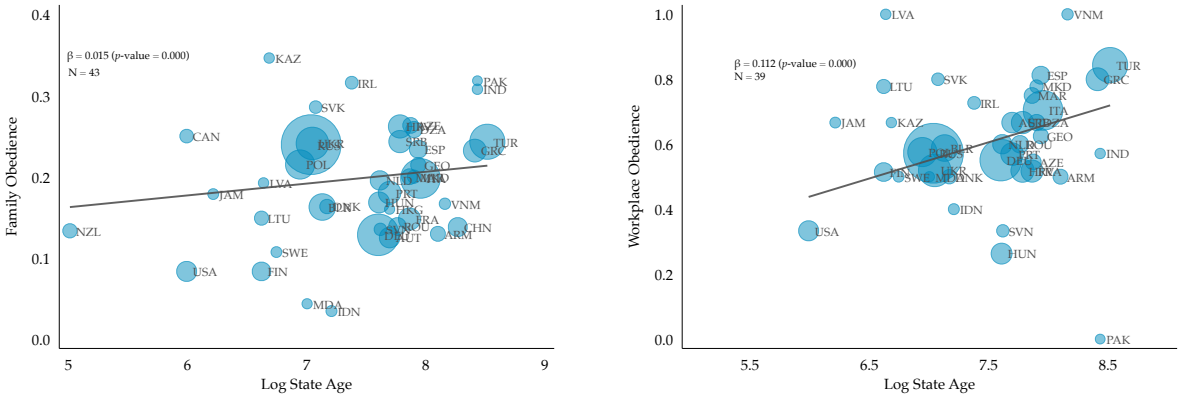
Using the constructed sample, in 1 we draw a scatterplot of a country's obedience levels of their second-generation immigrants (either in the family or the workplace) and their ancestral countries' average state history. We obtain a clean positive association. This positive country-level correlation between the ancestral state history and the second-generation immigrants' obedience levels supports the notion of cultural transmission and heritage of obedience.

We then proceed to an individual-level analysis. The equation we estimate is as follows.

$$Obedience_{igjt} = \alpha + \beta_1 StateHistory_g + \mathbf{X_i'}\gamma + \lambda_{jt} + \epsilon_{icjt} \tag{3}$$

where i denotes the second-generation immigrant who currently lives in country j, with ancestral country g, and is interviewed in year t. The ancestral country is defined as the parents' country of birth. When only one parent is an immigrant, the ancestral country is defined as their birth country. When both parents are immigrants, the ancestral country is defined as the mother's birth country. Outcomes of interest include family and workplace obedience. λ_{jt} denotes the birth country-by-year fixed effects, controlling for all time-variant country differences. $\mathbf{X_i'}$ denotes individual-level demographics, including gender, age, marital status, employment status, and

Figure 1. Correlation between Obedience and State Age of Parents' Birth Country



(a) Family Obedience

(b) Workplace Obedience

Notes: The scatter figures plot the correlation between ancestral countries' log state age and second-immigration immigrants' family obedience (Panel a) / workplace obedience (Panel b). We compute the average obedience level of individuals from the same ancestral country. We exclude those ancestral countries whose size of second-generation immigrants is smaller than 20. We use the sample size in each ancestral country as weights.

number of children. Standard errors are clustered at the country-by-year level. Since the question on work obedience was only asked in the EVS, we ended up with a much more restricted sample size, resulting in insufficient observations to control for the country-by-year fixed effect. In such cases, we control for survey year fixed effects instead.

Table 5 reports the results from Equation 3. Columns 1 and 2 use the *Log State Age* as the regressor, while columns 3 and 4 use the *Centralized Statehood Index* instead. Columns 1 and 3 control for birth-country-by-year fixed effects only. Columns 2 and 4 additionally control for individual-level demographics. In all specifications, we find a significantly positive relationship between the extent of statehood duration or the power concentration of the ancestral country and obedience levels, both in the family and in the workplace. Children whose parents are from a country with 90^{th} percentile *Centralized Statehood Index* tend to be 2.4 percent points more likely to think obedience is an important trait in children's education and 5.8 percent points more likely to follow instructions of the superior regardless one's own opinions, compared to their peers whose parents are from a relatively young and less centralized country (with 10^{th} *Centralized Statehood Index*). The magnitude of these estimates, though from a much more restricted sample, is comparable to our OLS estimates, indicating the robustness of our estimation.

More controls. Even though the birth country-by-year fixed effects have alleviated the potential influence coming from the living country's external society, the ancestry countries' economic and political factors may also affect the second-generation immigrants through their parents' living experience in their ancestry countries. To ease that concern, we include a series of additional control variables of the ancestry countries, including the quality of government administration, such as the rule of law, political stability, regulatory quality, etc. After controlling for these covariates,

Table 5: Effects of State History of Ancestry Country on Obedience

	(1)	(2)	(3)	(4)
Panel A: Dependent Variable - Family Obedience				
Log State Age	0.017***	0.020**		
	(0.004)	(0.000)		
Centralized Statehood Index			0.057*	0.068***
			(0.026)	(0.025)
Birth Country × Year FE	✓	✓	✓	✓
Individual Controls		✓		✓
Observations	5,085	5,085	5,085	5,085
# Unique Birth Countries	46	46	46	46
# Unique Parent's Birth Countries	102	102	102	102
Panel B: Dependent Variable - Workplace Obedience				
Log State Age	0.039*	0.035		
	(0.023)	(0.024)		
Centralized Statehood Index			0.177**	0.162*
			(0.085)	(0.087)
Year FE	✓	✓	✓	✓
Individual Controls		✓		✓
Observations	1,051	1,051	1,051	1,051
# Unique Birth Countries	40	40	40	40
# Unique Parent's Birth Countries	62	62	62	62

Notes: This table displays the effects of the state history of the ancestry countries on second-generation immigrants' obedience. Panel A displays results on family obedience, and Panel B displays results on workplace obedience. In Panel A, we control for the interaction of children's birth country and survey year fixed effects, and in Panel B, we control for survey year fixed effects because of a much smaller sample drawn from a limited number of countries. Individual-level controls include gender, age, marital status, employment status, and number of children. In Panel A, the standard errors are clustered at the country-year level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

we still observe a significant positive relationship between state history and obedience, with the magnitude of the estimates remaining almost unchanged (Appendix Table C8).

Robustness checks. We conducted several additional robustness checks to further validate this methodology.

Obedience of Emigrants: Our results would be biased if emigrants from countries with longer state histories are more obedient than non-emigrants. In this case, we might observe the same pattern even if obedience is not causally related to state history. This is unlikely to be true.[8] We plot in Figure B1 the cross-country pattern of obedience that can help illustrate this point. Panels (a) and (b) of Appendix Figure B1 show that emigrants are not more obedient than non-emigrants from the same birth country. If anything, there are more countries in which emigrants are less obe-

[8] Giuliano, Tabellini, et al. (2020) report that in the US, the largest immigrant-receiving country, European immigrants tend to have a more left-leaning ideology and are more rebellious compared to their non-emigrant counterparts. Our data support this finding.

dient. Panels (c) and (d) of Appendix Figure B1 plot the obedience level against the state history by emigrants and non-emigrants. There is also no pattern that countries with a longer state history produce more obedient emigrants. These patterns support our identification strategy using second-generation immigrants. To further validate our results, we restrict the analysis sample to countries where emigrants are more obedient. Specifically, we exclude countries where the obedience gap (emigrant minus non-emigrant) is i) smaller than 0, ii) smaller than 5%, or iii) smaller than 10%. The results remain consistent with the baseline specifications (Appendix Table C9).

Different Versions of State History: We repeat the robustness check under this setting by alternating different versions of state history via changing the time range covered and discount rates. Results are displayed in Appendix Table C10 and Table C11.

3.4. Exposure to the Dissolution of the Soviet Union During Adolescence

In this section, we utilize a quasi-experimental setting created by the sudden collapse of the Soviet Union in the 1990s to study the long-lasting effects of an authoritative regime on social norms of obedience.[9] The political system of the Soviet Union was highly centralized and hierarchical. The sudden demolition in 1991 marked the failure of communism and state centralization, and the post-period was characterized by economic depression, political chaos, and social instability. The thorough transformation of societies led to a non-reversible effect on people of this age, especially the young. Walker and Stephenson (2010) in their book say that "young people growing up in post-socialist Eastern Europe and the former Soviet Union negotiate a range of identities and transitions in their personal lives against a backdrop of thoroughgoing transformation in their societies." Inspired by this observation, we carry out a cohort difference-in-differences (DID) analysis by exploiting the cohort variation in the timing of experiencing the collapse and the geographic variation in the strength of the shock caused by the collapse. The construction of the cohort variation is based on the "impressionable years" hypothesis, which argues that attitudes and beliefs are malleable during adolescence and early adulthood and remain largely unchanged afterward (Krosnick and Alwin, 1989; Bašić, Falk, and Kosse, 2020)[10].

Specifically, the birth year and nationality will jointly determine the time and the intensity of an individual's exposure to the Dissolution of the Soviet Union. We implement two sample restrictions to improve comparability. Firstly, we restrict the sample to only European residents. Secondly, we selected individuals who were 15-35 years old in 1991. People born between 1966 and 1976 would have experienced the event during their adolescence, between the ages of 15 and 25, while those born earlier would have spent their entire adolescence under the Soviet Union's

[9]Such a quasi-experimental setting is often employed by other scholars. For example, Borjas and Doran (2012, 2015a,b); Agrawal, Goldfarb, and Teodoridis (2016); Barsbai, Rapoport, Steinmayr, and Trebesch (2017) study how the sudden supply shocks caused by the influx of Soviet mathematicians affect the dynamics of the U.S. academia. Alesina and Fuchs-Schündeln (2007) exploits the German separation and reunification to study the effects of the political regime on people's perception of state intervention policies.

[10]Much previous research has provided supporting evidence for the persistent effects of huge external shocks in youth, such as Olivetti, Patacchini, and Zenou (2020); Adukia, Eble, Harrison, Runesha, and Szasz (2023); Aneja, Farina, and Xu (2024); Chen, Zhang, Zhang, and Zhuge (2024).

reign. A summary of the statistics is shown in Appendix Table C12.

By leveraging the two sources of variation, we can identify the effect of highly hierarchical control during adolescence on people's obedience levels. We estimate the following equation:

$$Obedience_{ikjt} = \alpha + \beta_1 SovietUnion_j \times \mathbb{1}[15 \leq Age_i \leq 25\, pre1991] + \mathbf{X_i}'\gamma + \lambda_{jt} + \eta_k + \epsilon_{ikjt} \quad (4)$$

where individual i, born in year k, lives in country j and is interviewed in the year t. $SovietUnion_j$ is a binary indicator, equal to one if from an ex-Soviet country. $\mathbb{1}[15 \leq Age_{it} \leq 25 pre1991]$ is a binary indicator, equal to one if the individual spent their adolescence defined as age 15 and 25 years old before the collapse of the Soviet Union. Coefficient β_1 of the interaction term represents the effect of directly experiencing the collapse of the Soviet Union during adolescence on people's obedience levels. We also include the country-by-year fixed effects λ_{jt} and cohort fixed effects η_k in all specifications. $\mathbf{X_i}'$ denotes individual-level demographics, including gender, age, marital status, employment status, and number of children. Standard errors are clustered at the country-by-cohort level.

The regression results of Equation 4 are shown in Table 6. Columns 1 and 2 use obedience under a family context as the outcome, while columns 3 and 4 use obedience under a workplace context instead. Columns 1 and 3 control for the country-by-year fixed effects and cohort fixed effects. Columns 2 and 4 additionally control for individual-level characteristic covariates. We can observe a significantly positive impact of the Soviet Union's control on the obedience of individuals who spent their adolescence in former Soviet states. These individuals are 2.1 percent more likely to consider obedience as an important trait for their children to cultivate and 1.7 percent more likely to follow the instructions of their bosses regardless of their own opinions. These results indicate that the highly centralized statehood has a long-lasting effect on people's values regarding obedience.

Table 6: Effects of Exposure to Dissolution of the Soviet Union in Adolescence on Compliance

	Family Obedience		Workplace Obedience	
	(1)	(2)	(3)	(4)
𝟙(Age 15 - 25 in 1991) × Soviet Union Countries	0.018***	0.021***	0.014*	0.017**
	(0.006)	(0.006)	(0.008)	(0.008)
Country × Year FE	✓	✓	✓	✓
Cohort FE	✓	✓	✓	✓
Individual Controls		✓		✓
Observations	113,894	109,750	71,385	69,312
# Unique Birth Countries	41	41	40	40

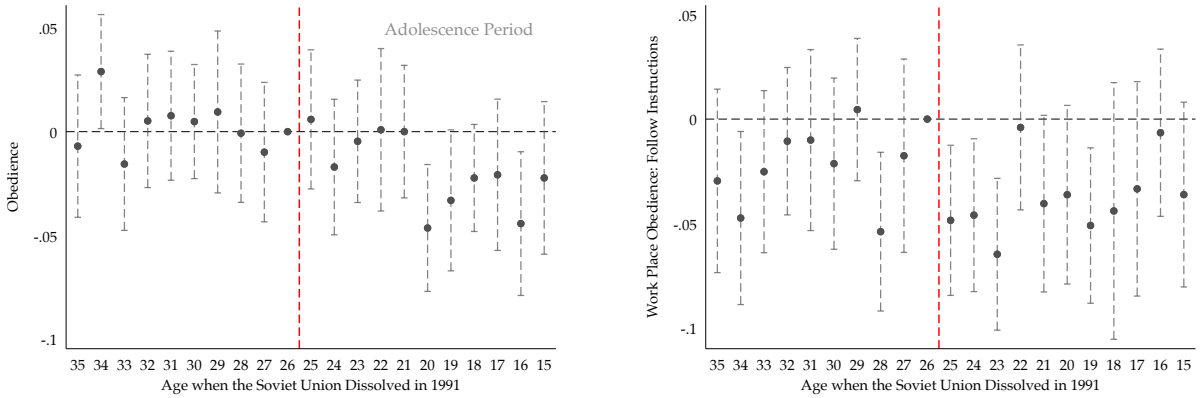
Notes: This table displays the effects of exposure to the dissolution of the Soviet Union during adolescence on obedience (family obedience and workplace obedience). We restrict the sample to the respondents in European countries and born between 1956 and 1976, i.e., those aged between 15 and 35 when the dissolution happened. In all specifications, we control for the interaction of country and survey year fixed effect and cohort year fixed effect. The individual-level covariates include gender, age, marital status, employment status, and number of children. All standard errors are clustered at the country-by-birth-year level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

We also estimate an event-study equation as follows.

$$Obedience_{ikjt} = \alpha + \sum_{15,p\neq 26}^{35} \beta_p \mathbb{1}[Age_i = p\ pre1991] \times SovietUnion_j + \mathbf{X_i}'\gamma + \lambda_{jt} + \eta_k + \epsilon_{ikjt} \quad (5)$$

where obedience is regressed on a series of interaction terms between indicators of age in 1991 and an indicator of living in ex-Soviet countries or not. We plot the coefficients $\beta_k, k = 15, ..., 35$ in Figure 2. Panel (a) plots the effects on obedience in the family. We can observe that if individuals experience collapse at an older age, their family obedience and workplace obedience don't change. However, if individuals experience it during adolescence, their obedience level will decrease. Such effects are more pronounced at various life stages across the two types of obedience. Family obedience decreases more dramatically if individuals are relatively younger (mainly between 15 and 20 years old) at the time of the dissolution, while workplace obedience decreases more dramatically if individuals are relatively older (mainly between 20 and 25 years old). One potential explanation can be the varying focus in different life stages. People aged between 20 and 25 are starting to build their careers, and therefore, their working attitudes are more affected. People aged between 15 and 20 often live with and heavily depend on their parents, which may explain why they are more affected in terms of family obedience.

Figure 2. Event Study of Exposure to the Dissolution of the Soviet Union on Compliance



(a) Family Obedience

(b) Workplace Obedience

Notes: The event-study figures plot the coefficients obtained from estimating Equation 4. Panel (a) uses family obedience as the outcome, while Panel (b) uses workplace obedience instead. 95% confidence intervals are shown. Age 26 in 1991 is set as the baseline level.

3.5. Related Outcomes: Protest Inclination and Gender Equality Attitudes

The benchmark analysis has demonstrated the impact of state history on two direct questions regarding obedience as the key dependent variable. In this section, we provide more supporting evidence through two relevant measures: individuals' protest inclination and attitudes towards gender inequality. They both indirectly reflect the ideology of obedience.

In terms of protest inclination, our measure is a self-reported willingness to participate in protest events. The WVS-EVS survey asks respondents: "Whether you have done any of these things, whether you might do it or would never under any circumstances do it? Sign a petition / join in boycotts / attend peaceful demonstrations / join strikes." Respondents' answers can be "have done," "might do" or "would never do." We code each individual variable equal to one if individuals have done or might do the action. We then construct a meta-protest index by taking the average of the above four variables. See Panel D of Appendix Table C13 for a summary description of this variable.

Alternating the outcome variable with the protest inclination index, we analyze it using our different specification designs. Results are reported in Appendix Table C14. Columns 1 and 2 report the 2SLS estimates following Section 3.2. Columns 3 and 4 restrict to the sample of second-generation immigrants, following Section 3.3. Column 5 repeats the Soviet Union specification design as in Section 3.4. All the estimates are consistent with the obedience outcomes, indicating that people living in countries with longer state histories are less likely to participate in protest events.

In terms of gender inequality, our specific measure is individuals' self-reported attitudes in the workplace setting. The WVS-EVS survey asks respondents' opinion on: "When jobs are scarce, men should have more right to a job than women," and "Men make better business executives than women do." They reflect people's biases in the working or management capabilities in the workplace, which can contribute to people's obedience towards their boss. Similar to above, we alternate the outcome variable with the measures of gender inequality and analyze the impact of state history on it under different specifications. Results are reported in Appendix Table C15, where we can observe a consistent positive relationship between state history and more gender inequality in people's implicit mindset.

4. Channels

The results in the previous section use various identification strategies to build the argument that statehood existence and power concentration can induce a higher degree of obedience today. In this section, we set out to add more understanding of the potential channels behind it. State history may affect the formation of social norms through its long-term impact on the availability of information. This section provides evidence on such cultural heritage and transmission. Sections 4.1 and 4.2 focus on two specific long-lasting cultural media – folklore and linguistics. Section 4.3 investigates how the modern information explosion brought by the Internet during the 2000s can play a mediating role in the historical cultural transmission of state history.

4.1. Folklore

Folklore, which is the collection of a community's traditional beliefs, customs, and stories, often takes the form of tales, proverbs, and jokes and is passed down by word of mouth over

generations. It is relatively stable and can help connect history to today. In light of this, we investigate whether countries with a higher level of centralized statehood tend to foster a culture of obedience in their folklore.

We make use of the folklore dataset compiled by Michalopoulos and Xue (2021). The anthropologist and folklorist Yuri Berezkin built a dataset that codes the presence of 2,564 motifs, each of which is given by a short text that summarizes a story, image, or lesson. Michalopoulos and Xue (2021) mapped the societies to modern countries and aggregated the frequency of each motif to a country level. To code the elements of obedience in motifs, we adopt two approaches. The first one is a "bag-of-words" method following Michalopoulos and Xue (2021) and Cao et al. (2021). We define a set of keywords that can reveal elements of obedience. The second one manipulates ChatGPT to classify motifs. Its advantage is that it can process complex logic, plots, and twists in motifs.

The word dictionary used in the "bag-of-words" approach includes words related to obedience, either directly or indirectly. Direct relevant words mainly fall into four categories: actions (e.g., "obey"), authority (e.g., "mandate"), consequences (e.g., "punishment"), and social pressure (e.g., "taboo"). Indirect relevant words also mainly fall into four categories: hierarchical terms (e.g., "authority"), moral or ethical terms (e.g., "faithfulness"), cultural or religious context (e.g., "doctrine"), and psychological or emotional states (e.g., "reverence"). See Appendix A for the full list of obedient keywords.

However, such a "bag-of-words" approach highly depends on a pre-defined vocabulary list, and it cannot process complex text nuances or trivial variations in terminology. Considering this, we train ChatGPT to classify motifs instead. Specifically, we ask ChatGPT to answer two questions with "Yes / No / Unclear" for each motif – "*Is there a requirement for the protagonist to obey a higher power or authority?*" and "*Is there a punishment for going against the superior authority's will?*" These two measures are designed to capture a culture where following authority is advocated, and any rule-breaking is punished. Take the motif "*d13hh*" as an example – "*A person visiting another world should not laugh or show surprise when he sees strange things. The violated rule dies or suffers damage.*" This motif explicitly includes a rule that the protagonist is expected to follow (*not laugh or show surprise*). Punishment is associated with breaking the rule (*die or suffer damage*). Appendix Table A1 displays the full list of obedience-related motifs.

Using each approach, we create a binary outcome that equals one if the motif is related to obedience (or punishment, as interpreted by ChatGPT). We calculate the total number of obedient motifs within each country. Since countries with longer state histories may naturally have a larger folklore corpus, we consistently control for the total number of motifs in all specifications. We flexibly control for other historical country-level covariates, such as ruggedness, ethnic fractionalization, linguistic fractionalization, and kinship intensity index[11].

The OLS estimates are reported in Table 7. We find that countries with a longer state age or a higher centralized statehood index are more likely to advocate rule-obeying and punish rule-

[11] Data all come from Gerring and Knutsen (2022)

Table 7: State History on Rule-Obeying Related Folklore

	Judged by ChatGPT as related to ...					
	Bag-of-Words		Rule-Obeying		Punishment for Rule Breaking	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Independent Variable - Log State Age						
Log State Age	0.482**	0.530**	0.940***	0.908***	0.760***	0.705***
	(0.236)	(0.234)	(0.155)	(0.155)	(0.128)	(0.131)
Total Number of Motifs	0.019***	0.018***	0.009***	0.009***	0.007***	0.007***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Country Controls		✓		✓		✓
Observations	150	140	150	140	150	140
Panel B: Independent Variable - Centralized Statehood Index						
Centralized Statehood Index	2.306	2.981*	5.186***	5.203***	4.227***	3.971***
	(1.523)	(1.531)	(0.982)	(0.972)	(0.770)	(0.790)
Total Number of Motifs	0.019***	0.018***	0.010***	0.009***	0.007***	0.007***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Country Controls		✓		✓		✓
Observations	150	140	150	140	150	140

Notes: This table displays the effects of state history on folklore related to obedience. Columns 1 and 2 code folklore using the "bag-of-words" approach by identifying the existence of certain keywords. Columns 3-6 code folklore with the assistance of ChatGPT. In columns 3 and 4, ChatGPT makes the judgment on whether the motif is related to obeying a rule. In columns 5 and 6, if the motif is about rule-obeying, ChatGPT makes a follow-up judgment on whether breaking the rule is punished. In all specifications, we control for the continent-fixed effects. Additional country controls include ruggedness, ethnic fractionalization, linguistic fractionalization, and kinship intensity index (calculated based on *Ethnographic Atlas*). All standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

breaking in their folklore traditions. Using the "bag-of-words" approach, our estimates indicate that countries with a 90th centralized statehood index have approximately one more obedient motif in their folklore compared to countries with a 10th centralized statehood index. Using the ChatGPT approach, countries with a 90th centralized statehood index have approximately 1.8 more motifs related to rule-obeying and 1.4 more motifs related to punishment for rule-breaking compared to countries with a 10th centralized statehood index. Regardless of which approach to code obedience, this positive pattern is consistently significant across various specifications. It suggests that past histories may affect contemporary value systems through intangible culture transmission.

4.2. Linguistic

Language is another important cultural medium that bridges the past and the present. As a complex adaptive system, language emerges from its underlying community and continuously adjusts to various dynamics over time. Therefore, linguistic traits can be seen as a natural reflection of social norms and cultural traits (Cavalli-Sforza, Menozzi, and Piazza, 1994; Cavalli-Sforza,

1997; Richerson, Boyd, and Henrich, 2010). In our study context, we focus on the politeness distinctions in languages. Politeness distinctions in pronouns are present in some languages (e.g., "tu" and "usted" in Spanish, "du" and "Sie" in German, and "tu" and "vous" in French, etc.) while being absent from others. Linguistics has underlined that such differential use of these pronouns is associated with the speakers' social class and is closely associated with power distance (Brown, Gilman, et al., 1960; Brown and Gilman, 1989).

Data on linguistic traits comes from The World Atlas of Language Structures (WALS), the most comprehensive database of phonological, grammatical, and lexical properties of languages, compiled by a team of 55 linguistic scholars (Dryer, 2013). For each individual language, WALS categorizes its "politeness distinctions in pronouns" into four levels: 1 = no politeness distinction, 2 = binary politeness distinction, 3 = multiple politeness distinctions, and 4 = pronouns avoided for politeness. We construct two country-level measures of politeness distinctions. The first approach is to utilize all languages available in WALS that originate from the country. The second one is to use the official languages of each country. We calculate the average politeness distinction levels, and all languages are given the same weights. Two measures emphasize slightly different aspects. Indigenous languages are a reflection of local civilizations and historical cultural environments, while official languages, which are most widely used in all formal and informal situations, can better reflect the contemporary cultural background.

We investigate whether countries with higher state history levels are more likely to develop languages with more politeness distinctions, which are beneficial for maintaining hierarchy and social class. Besides estimating a simple OLS equation, we also flexibly control for some additional historical covariates, including ruggedness, ethnic fractionalization index, linguistic fractionalization index, and the kinship index, same to the folklore regression.

The OLS estimates are reported in Table 8. Across different specifications, we observe a positive relationship. Countries with a 90th centralized statehood index have, on average, 0.43 more pronoun distinctions for all the languages, and 0.40 more for the official languages, compared to countries with a 10th centralized statehood index. This indicates that in countries with longer state history, a culture of obedience has already been deeply embedded in everyday environments as language is constantly being used by everyone, everywhere, and anytime. Languages, as cultural carriers, transmit cultural traits and unconsciously shape the psychology, ideology, and personality of people today.

4.3. Mediating Factor: Information Shock

In previous sections, we presented two threads of empirical evidence on how highly centralized statehood can foster a more obedient cultural norm via folklore and linguistics. Naturally, if obedient norms are transmitted through such information channels, then the interruption of these channels by external information shocks may weaken the influence of historical statehood on modern obedient culture. In this section, we test this hypothesis. Specifically, we examine whether the free flow of information and increased access to the Internet can loosen ideological

Table 8: State History on Linguistic Trait: Politeness

	(1)	(2)	(3)	(4)
Panel A: All Languages				
Log State Age	0.208***	0.166**		
	(0.067)	(0.071)		
Centralized Statehood Index			1.421***	1.238**
			(0.458)	(0.484)
Country Controls		✓		✓
Observations	94	90	94	90
Panel B: Official Languages				
Log State Age	0.202***	0.187**		
	(0.072)	(0.080)		
Centralized Statehood Index			1.165**	1.166**
			(0.502)	(0.566)
Country Controls		✓		✓
Observations	88	85	88	85

Notes: This table displays the effects of state history on the linguistic trait of politeness. Panel A uses all the available languages from the WALS spoken and oriented within each country and computes the average mean of politeness levels. Panel B uses the official languages for each country and computes the average mean of the politeness levels. Other controls include the ethnic fractionalization index, religion fractionalization index, and the kinship index. All standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

constraints and disrupt traditional cultural transmission. By doing so, we provide further evidence that the formation of obedient norms is shaped by the availability and flow of information.

A burgeoning research stream has provided increasing supporting evidence for the liberating role of the Internet (Paluck, 2009; Ferrara, Chong, and Duryea, 2012; Chen and Yang, 2019). In light of this, we hypothesize that individuals with greater access to the Internet during adolescence will be affected by the historical centralized statehood less and reveal a less obedient inclination. We will make use of the individual-level variation in exposure to the Internet during adolescence and investigate how it can mediate the cultural effects of state history.

Following Guriev et al. (2021), we compute each individual's average mobile Internet coverage rate during their adolescence. The Internet coverage data comes from the Collins Bartholomew Mobile Coverage Explorer. The mobile data is available from 2006 to 2023. This raster dataset consists of 1km×1km binary grid cells and has an indicator for each grid cell on whether it is covered by mobile Internet or not. We focus exclusively on 3G coverage, considering that areas covered by 4G or 5G are also covered by 3G. For each cell, we multiply its Internet coverage indicator by the population density, which is obtained from NASA. We then add up the values of all the grid cells within countries' boundaries to construct each country's weighted Internet coverage rate by year. For each individual, we calculate the exposure to the Internet during adolescence by taking the average mean of coverage rate of their adolescent years. We chose the 12-18 age range for two main reasons. On the one hand, children aged between 12 and 18 have a relatively comparable information set as most of them are attending middle and high schools, but after that, they can go

on different career paths, as some may continue their education and others may choose to work. On the other hand, the free flow of the population to other countries is more likely to happen after 18, as some of them may choose to pursue education opportunities in other countries.

Considering that individuals of different eras can vary intrinsically across many cultural and psychological aspects, we implement two sample restrictions to improve estimation accuracy. Firstly, we use post-2000 WVS-EVS waves as the Internet became extensively available in the 21st century. Secondly, we select individuals aged between 20 to 30 when being interviewed. Because the majority (66%) of non-missing observations on workplace obedience is before the 2000s, it leaves us a very limited sample to estimate. We concentrate on family obedience in this section. We estimate the following equation:

$$Obedience_{ikjt} = \alpha + \beta_1 Log(StateAge)_j \times Coverage_{it} + \mathbf{X_i}'\gamma + \lambda_{jt} + \eta_k + \epsilon_{ikjt} \tag{6}$$

where i denotes the individual currently living in country j, born in year k, and is interviewed in year t. $Coverage_{it}$ rate denotes the average Internet coverage rate during individual i's adolescent period. We include the country-by-year fixed effects λ_{jt} and cohort fixed effects η_k in all specifications. $\mathbf{X_i}'$ denotes individual-level demographics, including gender, age, marital status, employment status, and number of children. Standard errors are clustered at the country-by-birth-year level.

The regression results of Equation 6 are reported in Table 9. Panel A uses the *Log State Age* as the measure of state history, while Panel B uses the *Centralized Statehood Index* instead. Column 1 controls for the interaction of country and survey year fixed effects and birth year fixed effects. Column 2 additionally controls for individual-level characteristics. The results show that Internet exposure weakens the marginal effect of historical statehood on individuals' perceptions of obedience within the family. Those with broader access to the Internet during adolescence are more likely to develop a liberal and less obedience-oriented ideology, and are less influenced by traditional values and historical culture.

Naturally, the effect of free information through the Internet is expected to be weaker in contexts where information is subject to government censorship. We examine this by exploring heterogeneity in the impact of Internet exposure across regions with varying levels of government censorship. We measure each country's media censorship using the V-Dem dataset[12]. Specifically, we select the following variables: "How frequently does the government censor political information (text, audio, images, or video) on the Internet by filtering (blocking access to certain websites)?", "How often does the government shut down domestic access to the Internet?", "How often does the government shut down access to social media platforms?", "How comprehensive is the surveillance of political content in social media by the government or its agents?" and "To what degree does the government censor political content (i.e., deleting or filtering specific posts for political reasons) on social media in practice?". The responses are coded on a 0-4

[12] https://v-dem.net/.

Table 9: Heterogeneous Effects of State History on Family Obedience By Internet Coverage

	Full Sample		Low Censor	High Censor
	(1)	(2)	(3)	(4)
Panel A: Independent Variable - Log State Age				
Log State Age ×	-0.018***	-0.019***	-0.020***	-0.015
Internet Coverage Rate during Adolescence	(0.005)	(0.005)	(0.002)	(0.018)
p-value			0.260	
Country × Survey Year FE	✓	✓	✓	✓
Birth Year FE	✓	✓	✓	✓
Individual Controls		✓	✓	✓
Observations	102,698	97,278	48,087	16,816
# Unique Birth Countries	103	102	82	32
Panel B: Independent Variable - Centralized Statehood Index				
Centralized Statehood Index ×	-0.070*	-0.089*	-0.113***	0.002
Internet Coverage Rate during Adolescence	(0.039)	(0.047)	(0.043)	(0.041)
p-value			0.007	
Country × Survey Year FE	✓	✓	✓	✓
Birth Year FE	✓	✓	✓	✓
Individual Controls		✓	✓	✓
Observations	102,698	97,278	48,087	16,816
# Unique Birth Countries	103	102	82	32

Notes: This table displays the heterogeneous effects of state history on family obedience by mobile Internet's coverage rate. Columns 1 and 2 use the full sample, with column 2 including additional individual-level controls. Column 3 is restricted to individuals who experienced low censorship during adolescence, while column 4 is restricted to individuals who experienced high censorship during adolescence. The threshold is the mean censorship level. All specifications control for birth year fixed effect and the interaction of country and survey year fixed effect. Individual-level covariates include gender dummy, marital status dummy, employment status dummy, and number of children. All standard errors are clustered at the country-by-birth-year level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

scale, with a higher value representing more media freedom. We dichotomized each variable by coding 0-"extremely often," 1-"often" and 2-"sometimes (half times)" as 1 and coding 3-"rarely" and 4-"never" as 0. Following the same approach as for Internet exposure during adolescence, we construct the media censorship level for each individual. We then dichotomize the experienced censorship at the mean cutoff and create dummies for high or low censorship. We estimate the Equation 6 within individuals with highly censored Internet and within individuals with non-censored Internet, separately. Columns 3 and 4 of Table 9 display the regression results. Only when the Internet is noncensored it can mediate the effects of historical statehood. The magnitude of the Internet is correspondingly more prominent. However, when the Internet is subject to censorship, its moderating effect on the relationship between state history and obedience becomes insignificant.

Additionally, we also investigate the effect of free flow of information on the protest intensity on a country level, as a complement to the previous individual-level analysis. The protest data comes from the GDELT Project, which has processed more than a billion worldwide news articles from 1979 to 2019 to catalog more than half a billion distinct global events spanning the last 40 years. The protest intensity index is the percentage of news coverage rather than the number of protest events. Therefore, this index not only captures the protest frequency but also the severity of the events. See Panel D of Appendix Table C13 for a summary description of this variable. We estimate the following equation:

$$ProtestIntensity_{jt} = \alpha + \beta_1 Log(StateAge)_j \times Coverage_{jt} + \lambda_j + \eta_t + \epsilon_{jt} \tag{7}$$

where $ProtestIntensity_{jt}$ is the protest intensity of country j in year t and $Coverage_{jt}$ is the Internet coverage rate correspondingly. We include the country-fixed effects and year-fixed effects. Standard errors are clustered at the country level. Regression estimates are shown in Columns 3-4 of the Appendix Table C16. Countries with higher exposure to the Internet also have more and more serious protests happening.

5. Conclusion

The culture of obedience is an important factor shaping the organization of modern lives. When power is abused, the culture of obedience can lead to devastating consequences, as revealed in the Rwandan genocide or the Jewish Holocaust. However, the source of such a social norm is not well understood. Lab-in-the-field experiments based on anonymous resource allocation games reveal different results for different societies, suggesting potential complications in the formation and transmission of obedience.

Our study aims to reveal the state origin of obedience for a broad set of societies. Combining measures of state history, value attitude surveys, and various dimensions of contemporary countries, we find that people who live in societies with a history of longer and more power-concentrated states report both a higher tendency to obey their bosses in the workplace and a

higher expectation of obedience to their children. We pursue causal identification using three independent strategies. The first strategy uses the temperature and precipitation seasonality as an instrument for the state history to explore the causal relationship between state history and modern obedience levels. The second strategy explores the variation of obedience among second-generation immigrants who were born in the United States or Europe. The third strategy takes advantage of the sudden dissolution of the Soviet Union in the 1990s and explores the exposure to the collapse of a huge empire during the adolescence of European citizens. Results from these strategies jointly suggest the causal effect of long and centralized state history on the contemporary level of obedience to power. We further corroborate our analysis by showing that individuals who live in societies with longer and more centralized state histories also tend to participate in protests less and report a more equal attitude on gender issues. Chanel analysis indicates that such cultural transmission is via folklore and language formation, and the modern invention of the Internet can interfere with the process of cultural inheritance.

This paper uncovers the deep historical roots of obedience to authority, identifying the centralized state as an incubator of this cultural norm. Our multi-method causal evidence suggests that the institutional legacy of statehood can shape fundamental social preferences, with implications for organizational behavior, political participation, and gender relations. While we refrain from normative judgment, our analysis highlights a potential duality: the same cultural trait that may facilitate social coordination can also enable the abuse of power. Notably, our findings on the internet suggest that open information environments can disrupt the transmission of historically inherited norms. This points to the dynamic interplay between deep historical legacies and contemporary forces of change in shaping the cultural foundations of modern societies.

References

Acemoglu, D., 2022. Obedience in the labour market and social mobility: a socioeconomic approach. Economica 89, S2–S37.

Adukia, A., Eble, A., Harrison, E., Runesha, H. B., Szasz, T., 2023. What we teach about race and gender: Representation in images and text of children's books. The Quarterly Journal of Economics 138, 2225–2285.

Agrawal, A., Goldfarb, A., Teodoridis, F., 2016. Understanding the changing structure of scientific inquiry. American Economic Journal: Applied Economics 8, 100–128.

Akerlof, G. A., 1991. Procrastination and obedience. American Economic Review 81, 1–19.

Alesina, A., Fuchs-Schündeln, N., 2007. Good-bye lenin (or not?): The effect of communism on people's preferences. American Economic Review 97, 1507–1528.

Alesina, A., Giuliano, P., Nunn, N., 2011. Fertility and the plough. American Economic Review 101, 499–503.

Alesina, A., Giuliano, P., Nunn, N., 2013. On the origins of gender roles: Women and the plough. The quarterly journal of economics 128, 469–530.

Aneja, A., Farina, S., Xu, G., 2024. Beyond the war: Public service and the transmission of gender norms .

Ashraf, Q., Galor, O., 2013. Genetic diversity and the origins of cultural fragmentation. American Economic Review 103, 528–533.

Barsbai, T., Rapoport, H., Steinmayr, A., Trebesch, C., 2017. The effect of labor migration on the diffusion of democracy: evidence from a former soviet republic. American Economic Journal: Applied Economics 9, 36–69.

Bašić, Z., Falk, A., Kosse, F., 2020. The development of egalitarian norm enforcement in childhood and adolescence. Journal of Economic Behavior & Organization 179, 667–680.

Bauer, M., Blattman, C., Chytilová, J., Henrich, J., Miguel, E., Mitts, T., 2016. Can war foster cooperation? Journal of Economic Perspectives 30, 249–274.

Becker, A., Enke, B., Falk, A., 2020. Ancient origins of the global variation in economic preferences. In: *AEA Papers and Proceedings*, American Economic Association 2014 Broadway, Suite 305, Nashville, TN 37203, vol. 110, pp. 319–323.

Bian, B., Li, J., Xu, T., Foutz, N. Z., 2022. Individualism during crises. Review of Economics and Statistics 104, 368–385.

Bockstette, V., Chanda, A., Putterman, L., 2002. States and markets: The advantage of an early start. Journal of Economic growth 7, 347–369.

Borcan, O., Olsson, O., Putterman, L., 2018. State history and economic development: evidence from six millennia. Journal of Economic Growth 23, 1–40.

Borjas, G. J., Doran, K. B., 2012. The collapse of the soviet union and the productivity of american mathematicians. The Quarterly Journal of Economics 127, 1143–1203.

Borjas, G. J., Doran, K. B., 2015a. Cognitive mobility: labor market responses to supply shocks in the space of ideas. Journal of Labor Economics 33, S109–S145.

Borjas, G. J., Doran, K. B., 2015b. Which peers matter? the relative impacts of collaborators, colleagues, and competitors. Review of economics and statistics 97, 1104–1117.

Brown, R., Gilman, A., 1989. Politeness theory and shakespeare's four major tragedies. Language in society 18, 159–212.

Brown, R., Gilman, A., et al., 1960. The pronouns of power and solidarity. Bobbs-Merrill.

Campante, F. R., Chor, D., 2010. Obedience, schooling, and political participation .

Campante, F. R., Chor, D., 2017. just do your job": Obedience, routine tasks, and the pattern of specialization. ERIA Discussion Paper No. DP-2016-35 .

Cao, Y., Enke, B., Falk, A., Giuliano, P., Nunn, N., 2021. Herding, warfare, and a culture of honor: Global evidence .

Cassar, A., d'Adda, G., Grosjean, P., 2014. Institutional quality, culture, and norms of cooperation: Evidence from behavioral field experiments. The Journal of Law and Economics 57, 821–863.

Cavalli-Sforza, L. L., 1997. Genes, peoples, and languages. Proceedings of the National Academy of Sciences 94, 7719–7724.

Cavalli-Sforza, L. L., Menozzi, P., Piazza, A., 1994. The History and Geography of Human Genes.

Princeton university press.

Chen, X., Zhang, P., Zhang, P., Zhuge, A., 2024. The enduring trauma: How officials' childhood famine experiences affect year-end spending surge. Journal of Development Economics p. 103356.

Chen, Y., Yang, D. Y., 2019. The impact of media censorship: 1984 or brave new world? American Economic Review 109, 2294–2332.

Dryer, M. S., 2013. The world atlas of language structures online. Max Planck Institute for Evolutionary Anthropology .

Enke, B., 2019. Kinship, cooperation, and the evolution of moral systems. The Quarterly Journal of Economics 134, 953–1019.

Ferrara, E. L., Chong, A., Duryea, S., 2012. Soap operas and fertility: Evidence from brazil. American Economic Journal: Applied Economics 4, 1–31.

Fiszbein, M., Jung, Y., Vollrath, D., 2022. Agrarian origins of individualism and collectivism. Tech. rep., National Bureau of Economic Research.

Foucault, M., 1975. Discipline and Punish: the Birth of the Prison, vol. 1. Gallimard.

Galor, O., Michalopoulos, S., 2012. Evolution and the growth process: Natural selection of entrepreneurial traits. Journal of Economic Theory 147, 759–780.

Galor, O., Özak, Ö., Sarid, A., 2018. Geographical origins of language structures. Available at SSRN 3097220 .

Gerring, J., Knutsen, C. H., 2022. Homicide and state history. American Sociological Review 87, 950–980.

Giuliano, P., Nunn, N., 2021. Understanding cultural persistence and change. The Review of Economic Studies 88, 1541–1581.

Giuliano, P., Tabellini, M., et al., 2020. The seeds of ideology: Historical immigration and political preferences in the united states. Tech. rep., National Bureau of Economic Research.

Gorodnichenko, Y., Roland, G., 2017. Culture, institutions, and the wealth of nations. Review of Economics and Statistics 99, 402–416.

Grosjean, P., 2011. The weight of history on european cultural integration: a gravity approach. American Economic Review 101, 504–508.

Guriev, S., Melnikov, N., Zhuravskaya, E., 2021. 3g internet and confidence in government. The Quarterly Journal of Economics 136, 2533–2613.

Hansen, C. W., Jensen, P. S., Skovsgaard, C. V., 2015. Modern gender roles and agricultural history: the neolithic inheritance. Journal of Economic Growth 20, 365–404.

Heldring, L., 2020. Bureaucracy as a tool for politicians: Evidence from weimar and nazi germany .

Heldring, L., 2021. The origins of violence in rwanda. The Review of Economic Studies 88, 730–763.

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., McElreath, R., 2001. In search of homo economicus: behavioral experiments in 15 small-scale societies. American economic

review 91, 73–78.

Henrich, J., Heine, S. J., Norenzayan, A., 2010. The weirdest people in the world? Behavioral and brain sciences 33, 61–83.

Krosnick, J. A., Alwin, D. F., 1989. Aging and susceptibility to attitude change. Journal of personality and social psychology 57, 416.

Lowes, S., Nunn, N., Robinson, J. A., Weigel, J. L., 2017. The evolution of culture and institutions: Evidence from the kuba kingdom. Econometrica 85, 1065–1091.

Matranga, A., 2024. The ant and the grasshopper: Seasonality and the invention of agriculture. The Quarterly Journal of Economics p. qjae012.

Michalopoulos, S., Xue, M. M., 2021. Folklore. The quarterly journal of economics 136, 1993–2046.

Ochsner, C., Roesel, F., 2024. Activated history: The case of the turkish sieges of vienna. American Economic Journal: Applied Economics 16, 76–112.

Olivetti, C., Patacchini, E., Zenou, Y., 2020. Mothers, peers, and gender-role identity. Journal of the European Economic Association 18, 266–301.

Paluck, E. L., 2009. Reducing intergroup prejudice and conflict using the media: a field experiment in rwanda. Journal of personality and social psychology 96, 574.

Rantakari, H., 2025. Simon says? equilibrium obedience and the limits of authority. Journal of Law, Economics, and Organization p. ewad026.

Richerson, P. J., Boyd, R., Henrich, J., 2010. Gene-culture coevolution in the age of genomics. Proceedings of the National Academy of Sciences 107, 8985–8992.

Rozenas, A., Talibova, R., Zhukov, Y. M., 2024. Fighting for tyranny: State repression and combat motivation. American Economic Journal: Applied Economics 16, 44–75.

Schulz, J. F., Bahrami-Rad, D., Beauchamp, J. P., Henrich, J., 2019. The church, intensive kinship, and global psychological variation. Science 366, eaau5141.

Scott, J. C., 1998. Seeing like a state: How certain schemes to improve the human condition have failed. Yale University Press.

Smith, B. D., 1995. The emergence of agriculture .

Straus, S., 2006. The order of genocide: Race, power, and war in Rwanda. Cornell University Press.

Tabellini, G., 2008. The scope of cooperation: Values and incentives. The Quarterly Journal of Economics 123, 905–950.

Tabellini, G., 2010. Culture and institutions: economic development in the regions of europe. Journal of the European Economic Association 8, 677–716.

Van den Steen, E., 2010. Interpersonal authority in a theory of the firm. American Economic Review 100, 466–490.

Walker, C., Stephenson, S., 2010. Youth and social change in eastern europe and the former soviet union. Journal of youth studies 13, 521–532.

Weber, M., 1978. Economy and society: An outline of interpretive sociology, vol. 1. University of California Press.

Appendix

Appendix A. Obedience Related Folklore

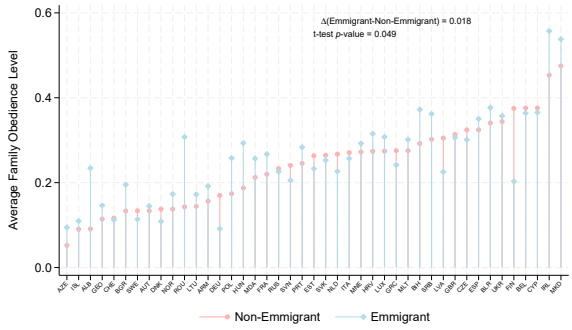
1. Directly Related to Obedience
    - Actions: obey, submit, comply, conform, adhere, follow, respect, observe
    - Authority: rule, command, order, law, edict, decree, mandate, directive
    - Consequences: punishment(punish), penalty, sanction, discipline, reprimand, retribution
    - Social Pressure: taboo, ban, prohibition(prohibit), restrict, forbid, coerce, force, compel
2. Indirectly Related to Obedience
    - Hierarchical Terms: authority, superior, inferior, master, servant, leader, follower
    - Moral or Ethical Terms: duty, loyalty, faithfulness, allegiance, submission, surrender
    - Cultural/Religious Context: tradition, custom, ritual, doctrine, creed, dogma, orthodoxy
    - Psychological/Emotional States: fear, respect, reverence, awe, humility, deference

Appendix Table A1: Full List of Relevant Folklore Motifs

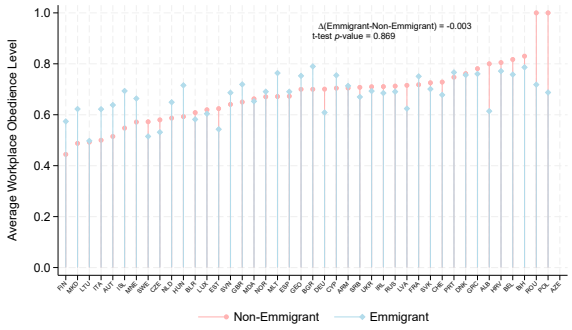
Motif Code	Motif Description	Rule Obey	Punishment
a25	Going to earth (for the first time or after a world catastrophe) or being present at the first sunrise, people should not immediately look at the light	✓	✗
a45	Man teases, insults the moon and is punished as a result	✓	✓
b23	The deity forbids making a fire for cooking and punishes those who violate the ban	✓	✓
c35	It becomes known that if the characters, personifying natural phenomena and parts of the universe, get married, this will lead to a catastrophe. Marriage is upset	✓	✓
d13hh	A person visiting another world should not laugh or show surprise when he sees strange things. The violated rule dies or suffers damage.	✓	✓
h24b	The character must open the vessel with the soul of the deceased when it reaches the place or after a certain time; opens before the deadline, the soul flies away	✓	✓
j20	While the husband or brother is on a hunt, an evil spirit comes to his wife or sister; he kills or cripples her or her brother after she violates the prohibition to open the door for the guest, look at him or speak to him	✓	✓
k100f	The fisherman caught an unusual fish (rarely: some kind of aquatic creature). His son (a worker) lets her go. For this, the father (the king) chases him away, or he who let go of the fish leaves. Saved fish helps him	✓	✓
k116	The young man sets off. The father or mother teaches him to choose a companion: do not take someone who does not share the bread equally, who will not wait, etc.	✓	✗
k14	A person receives or buys simple tips, the value of which is unclear at first (to travel with a satellite, not to refuse breakfast, etc.) and either follows them, achieving success, or breaks, getting into trouble	✓	✓
k161	The character who has deprived the dragon of freedom (demon, thunder, etc.) tells others not to unlock the dungeon (not to enter a certain room, not to give chained drinks, etc.) The ban is broken and the chained one is freed, which entails disaster.	✓	✓
k27x4	The character is told to climb a tree (pillar, mountain)) and descend back, holding a full open vessel in his hand and not spilling a drop out of it	✓	✓
k35a2	A man kills an animal with a glowing skin. Upon learning of this, the domineering character gives him difficult assignments.	✓	✓
k56	One of the (consolidated) sisters, friends or acquaintances of girls, girls or young women (wives of one man) meets a character who is able to reward and punish. She behaves correctly, gets a reward. The other (others) tries to repeat everything, but behaves incorrectly and punished (rarely: not awarded).	✓	✓
k56a	Two or three sisters are consistently sent to a powerful character. The first or the first two act incorrectly, die or do not reach the goal. The latter acts correctly, is saved or rewarded. Only those options in which the girls themselves leave the house and intentionally or accidentally get to the future husband, and not the husband comes to them	✓	✓
k56a2	A character (usually a girl) goes to another (usually an old woman). He asks the visitor to perform absurd and harmful actions (to disorder the house, to bring dirty water, etc.). The visitor performs everything contrary to what has been said (tidies up the house, brings clean water), is rewarded. Another character performs everything literally, punished.	✓	✓
k56b	The two men meet alternately with a character who is able to reward and punish. One behaves correctly, awarded, the other (or two others) - wrong, punished	✓	✓
k56c	A man loses an ax. The spirit or leader offers him a gold ax, the man says that the ax is not his, and for this he receives gold and silver axes as a reward. Usually, another person deliberately loses an ordinary ax, tends to get gold, but fails	✓	✓
k61c1	Man will die if he does not find the answer to the demon's question. A person or his acquaintance accidentally learns the answer by hearing the demon talking to himself or to another demon.	✓	✓
k71	The coyote brother successfully defends against enemies as long as the coyote does not violate a specific prohibition. Enemies are killing a brother; coyote comes to the enemy camp, extracts the remains of his brother and runs away from enemies or kills them. Brother comes to life	✓	✓
k72a	The king notices that his prohibition to light the lights at night is violated.	✓	✗
m114b	The character is offered to perform at the same time and not to perform any actions (come not dressed and not naked, be not in the house or outside the threshold, etc.)	✓	✗
m39a6i	A person sends another food or things and orders the messenger to convey to the recipient certain words, the meaning of which the messenger does not understand. On the way, he stole or ate some of what he was supposed to bring. From the words of the messenger, the recipient understands what was transmitted and accuses him of theft	✓	✓
m39a2	The character performs absurd actions, understanding the instructions too literally or with a delay of one episode (that is, performing what concerned the previous episode). One of the episodes is associated with improper handling of the needle and other sharp objects.	✓	✗

Appendix B. Appendix Figures

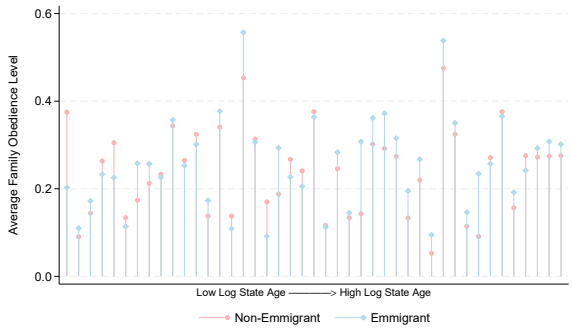
Appendix Figure B1. Comparison of Obedience Level Between Emmigrants and Non-Emmigrants



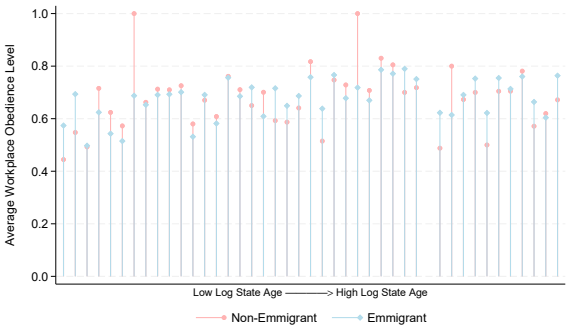
(a) Cross-Country Family Obedience



(b) Cross-Country Workplace Obedience



(c) Family Obedience and State Age



(d) Workplace Obedience and State Age

Notes: Panel (a) and (b) graphs plot the family obedience and workplace obedience levels for emmigrants and non-emmigrants within the same birth country. The p-value comes from a pairwise test, testing whether the difference is significantly different from zero. Panel (c) and (d) graphs plot the family obedience and workplace obedience levels of emmigrants and non-emmigrants against the state age in the log form. State age increases as moving right along the x-axis.

Appendix C. Appendix Tables

Appendix Table C2: Effects of State History on Obedience: OLS, Varying State History Range

	Family Obedience		Workplace Obedience	
	(1)	(2)	(3)	(4)
Centralized Statehood Index (3500 BCE-1CE, 1% discount)	0.300***		0.096***	
	(0.007)		(0.011)	
Centralized Statehood Index (3500BCE-1500CE, 1% discount)		0.122***		0.050***
		(0.006)		(0.009)
Continent × Year FE	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓
Country Controls	✓	✓	✓	✓
Observations	519,263	519,263	224,286	224,286
# Unique Birth Countries	100	100	72	72

Notes: This table displays the effects of state history on obedience. For a robustness check, we alternate the state history with more ancient versions. Specifically, we truncate the time range used to compute the state history index to 3500BCE-1CE and 3500BCE-1500CE, with a discount rate of 1% uniformly. The individual covariates include gender, age, marital status, employment status, and number of children. Standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C3: Effects of State History on Obedience: OLS, Varying Discount Rates in Centralized Statehood Index

	Family Obedience		Workplace Obedience	
	(1)	(2)	(3)	(4)
Centralized Statehood Index (0.1% discount rate)	0.186***		0.063***	
	(0.007)		(0.011)	
Centralized Statehood Index (2% discount rate)		0.089***		0.031***
		(0.006)		(0.009)
Continent × Year FE	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓
Country Controls	✓	✓	✓	✓
Observations	519,263	519,263	224,286	224,286
# Unique Birth Countries	100	100	72	72

Notes: This table displays the effects of state history on obedience. For a robustness check, we alternate the state history with more ancient versions. Specifically, alternates the discount rates used in the construction of the *Centralized Statehood Index*. The individual covariates include gender, age, marital status, employment status, and number of children. Standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C4: Seasonality and State History

	(1)	(2)	(3)	(4)
Temperature Seasonality	0.066***		0.011***	
	(0.012)		(0.003)	
Prescription Seasonality		0.311**		0.065**
		(0.133)		(0.029)
Continent × Year FE	✓	✓	✓	✓
Observations	79	79	79	79

Notes: This table displays the first stage of the temperature seasonality and prescription seasonality on the state history on the country level. Standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C5: Effects of State History on Obedience: 2SLS, Varying State History Range

	Family Obedience		Workplace Obedience	
	(1)	(2)	(3)	(4)
Centralized Statehood Index (3500 BCE-1CE, 1% discount)	0.683***		0.203***	
	(0.012)		(0.020)	
Centralized Statehood Index (3500BCE-1500CE, 1% discount)		0.689***		0.172***
		(0.013)		(0.017)
Continent × Year FE	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓
Country Controls	✓	✓	✓	✓
Observations	414,804	414,804	182,468	182,468
# Unique Birth Countries	77	77	57	57

Notes: This table displays the effects of state history on obedience. For a robustness check, we alternate the state history with more ancient versions. Specifically, we truncate the time range used to compute the state history index to 3500BCE-1CE and 3500BCE-1500CE, with a discount rate of 1% uniformly. The individual covariates include gender, age, marital status, employment status, and number of children. Standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C6: Effects of State History on Obedience: 2SLS, Varying Discount Rates in Centralized Statehood Index

	Family Obedience		Workplace Obedience	
	(1)	(2)	(3)	(4)
Centralized Statehood Index (0.1% discount rate)	0.787***		0.200***	
	(0.014)		(0.019)	
Centralized Statehood Index (2% discount rate)		0.854***		0.189***
		(0.015)		(0.018)
Continent × Year FE	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓
Country Controls	✓	✓	✓	✓
Observations	414,804	414,804	182,468	182,468
# Unique Birth Countries	77	77	57	57

Notes: This table displays the effects of state history on obedience. For a robustness check, we alternate the state history with more ancient versions. Specifically, alternates the discount rates used in the construction of the *Centralized Statehood Index*. The individual covariates include gender, age, marital status, employment status, and number of children. Standard errors are robust. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C7: Summary Statistics: Second-Generation Immigrations

	N	Mean	SD	Min	Medium	Max
Panel A: State History Measures						
Log State Age	102	7.193	0.934	4.605	7.423	8.613
Centralized Statehood Index	102	0.272	0.175	0.020	0.264	0.743
Panel B: Individual Compliance Outcomes						
Family Obedience	5,085	0.196	0.397	0.000	0.000	1.000
Workplace Obedience	1,051	0.319	0.466	0.000	0.000	1.000
Protest	5,099	0.577	0.379	0.000	0.750	1.000
Men Enjoy More Rights	5,111	1.469	0.762	1.000	1.000	3.000
Men Being Better Executive	3,981	1.912	0.879	1.000	2.000	4.000
Panel C: Individual Covariates						
Female	5,085	0.557	0.497	0.000	1.000	1.000
Age	5,085	46.164	17.523	18.000	45.000	82.000
Married	5,085	0.494	0.500	0.000	0.000	1.000
Employed	5,085	0.525	0.499	0.000	1.000	1.000
Number of Children	5,085	1.348	1.259	0.000	1.000	7.000

Notes: This table reports the summary statistics of second-generation immigrants in Section 3.3.

Appendix Table C8: Effects of State History of Ancestry Country on Obedience: Additional Controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Additional Controls	No Additional Control	Rule of Law	Gov. Effectiveness	Control of Corruption	Political Stability	Voice Accountability	Regulatory Quality
Log State Age	0.023***	0.018*	0.018**	0.018**	0.015*	0.019*	0.019**
	(0.008)	(0.010)	(0.009)	(0.009)	(0.009)	(0.010)	(0.009)
Birth Country × Year FE	✓	✓	✓	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓	✓	✓	✓
Observations	4,868	4,868	4,868	4,868	4,868	4,868	4,868
# Unique Birth Countries	45	45	45	45	45	45	45
# Unique Parent's Birth Countries	99	99	99	99	99	99	99

Notes: This table displays the effects of state history of ancestry countries on second-generation immigrants' obedience with additional country-level covariates controlled. In all specifications, the interaction of children's birth country and survey year fixed effects are controlled, and a series of individual covariates (gender, age, marital status, employment status, and number of children). All standard errors are clustered at the country-birth-year level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C9: Effects of State History of Parents' Birth Country on Second-Generation Immigrants: Excluding Obedient Parents

	$\Delta \leq 0$	$\Delta \leq -0.05$	$\Delta \leq -0.1$	$\Delta \leq 0$	$\Delta \leq -0.05$	$\Delta \leq -0.1$
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Family Obedience						
Log State Age	0.017***	0.023***	0.020***			
	(0.006)	(0.004)	(0.003)			
Centralized Statehood Index				0.071*	0.080***	0.071***
				(0.037)	(0.019)	(0.018)
Birth Country × Year FE	✓	✓	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓	✓	✓
Observations	3,007	4,586	5,012	3,007	4,586	5,012
# Unique Birth Countries	46	46	46	46	46	46
# Unique Parent's Birth Countries	89	99	101	89	99	101
Panel B: Workplace Obedience						
Log State Age	0.036	0.036	0.034			
	(0.026)	(0.025)	(0.025)			
Centralized Statehood Index				0.147	0.169*	0.154*
				(0.093)	(0.090)	(0.088)
Year FE	✓	✓	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓	✓	✓
Observations	834	933	1,001	834	933	1,001
# Unique Birth Countries	39	39	40	39	39	40
# Unique Parent's Birth Countries	47	54	59	47	54	59

Notes: This table displays the effects of state history of ancestry countries on second-generation immigrants' compliance-related behavior. For robustness check, we restrict to those in whose ancestry countries, family obedience (or workplace obedience) difference (emmigrants minus non-emmigrants) is i) smaller than 0; ii) smaller than 5%; iii) smaller than 10%. The individual covariates include gender, age, marital status, employment status, and number of children. In Panel A, the standard errors are clustered at the country-birth-year level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C10: Effects of State History of Ancestry Country on Obedience: Varying State History Range

	Family Obedience		Workplace Obedience	
	(1)	(2)	(3)	(4)
Centralized Statehood Index (3500 BCE-1CE, 1% discount)	0.119***		0.244***	
	(0.028)		(0.093)	
Centralized Statehood Index (3500BCE-1500CE, 1% discount)		0.058**		0.131*
		(0.023)		(0.079)
Birth Country × Year FE	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓
Observations	5,085	5,085	1,051	1,051
# Unique Birth Countries	46	46	40	40
# Unique Parent's Birth Countries	102	102	62	62

Notes: This table displays the effects of state history of ancestry countries on second-generation immigrants' compliance-related behavior. For robustness check, we alternate state history with more ancient versions. Specifically, we truncate the time range used to compute the state history index to 3500BCE-1CE and 3500BCE-1500CE, with a discount rate of 1% uniformly. The individual covariates include gender, age, marital status, employment status, and number of children. The standard errors are clustered at the country-birth-year level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C11: Effects of State History of Ancestry Country on Obedience: Varying Discount Rates in Centralized Statehood Index

	Family Obedience		Workplace Obedience	
	(1)	(2)	(3)	(4)
Centralized Statehood Index (0.1% discount rate)	0.084***		0.188**	
	(0.028)		(0.092)	
Centralized Statehood Index (2% discount rate)		0.055**		0.143*
		(0.023)		(0.084)
Birth Country × Year FE	✓	✓	✓	✓
Individual Controls	✓	✓	✓	✓
Observations	5,085	5,085	1,051	1,051
# Unique Birth Countries	46	46	40	40
# Unique Parent's Birth Countries	102	102	62	62

Notes: This table alternates the discount rates used in the construction of *Centralized Statehood Index*. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Appendix Table C12: Summary Statistics: Dissolution of the Soviet Union

	N	Mean	SD	Min	Medium	Max
Panel A: Individual Compliance Outcomes						
Family Obedience	116,546	0.271	0.445	0.000	0.000	1.000
Workplace Obedience	73,239	0.287	0.453	0.000	0.000	1.000
Protest	115,741	0.567	0.378	0.000	0.667	1.000
Men Enjoy More Rights	112,618	1.592	0.839	1.000	1.000	3.000
Men Being Better Executive	41,003	1.977	0.882	1.000	2.000	4.000
Panel B: Individual Covariates						
Share of Female	119,325	0.540	0.498	0.000	0.667	1.000
Age	119,325	38.835	10.975	15.000	39.000	66.000
Share of Married	119,325	0.657	0.475	0.000	1.000	1.000
Share of Employed	119,325	0.647	0.478	0.000	1.000	1.000
Number of Children	119,325	1.466	1.228	0.000	2.000	8.000

Notes: This table reports the summary statistics of respondents aging between 15 to 35 when the dissolution of the Soviet Union happened in Section 3.4

Appendix Table C13: Summary Statistics: Internet Exposure

	N	Mean	SD	Min	Medium	Max
Panel A: Individual Internet Coverage Rate in Adolescence						
Internet Coverage Rate in Adolescence	98,747	0.102	0.242	0.000	0.000	1.000
Panel B: Individual Compliance Outcomes						
Family Obedience	97,278	0.401	0.490	0.000	0.000	1.000
Workplace Obedience	26,253	0.771	0.420	0.000	1.000	1.000
Protest	91,175	0.467	0.400	0.000	0.500	1.000
Men Enjoy More Rights	97,403	1.875	0.917	1.000	2.000	3.000
Men Being Better Executive	66,904	2.325	0.984	1.000	2.000	4.000
Panel C: Individual Covariates						
Share of Female	98,747	0.523	0.499	0.000	1.000	1.000
Age	98,747	25.041	3.180	20.000	25.000	30.000
Share of Married	98,747	0.403	0.490	0.000	0.000	1.000
Share of Employed	98,747	0.433	0.496	0.000	0.000	1.000
Number of Children	98,747	0.690	1.097	0.000	0.000	5.000
Panel D: Country-by-Year Variables						
Protest Intensity	7,724	1.199	1.585	0.006	0.811	39.130
Weighted Mobile Coverage Rate	7,724	0.123	0.293	0.000	0.000	1.000

Notes: This table reports the summary statistics of country variables, country-by-year variables and individual variables used in Section 4.3.

Appendix Table C14: Effects of State History of Ancestry Country on Protest Inclination

	Instrumental Variable		Second-Generation Immigrants		Soviet Union
	(1)	(2)	(3)	(4)	(5)
$\widehat{LogStateAge}$	-0.051***				
	(0.003)				
$\widehat{CentralizedStatehoodIndex}$		-0.210***			
		(0.011)			
Ancestry Country's Log State Age			-0.032***		
			(0.008)		
Ancestry Country's Centralized Statehood Index				-0.177***	
				(0.046)	
$\mathbb{1}$(Age 15 - 25 in 1991) $\times$ Soviet Union Countries					-0.041**
					(0.016)
Country $\times$ Survey Year FE	✓	✓	✓	✓	✓
Birth Year FE					✓
Individual Controls	✓	✓	✓	✓	✓
Observations	395,154	395,154	5,098	5,098	43,436
# Unique Birth Countries	77	77	46	46	35
# Unique Parent's Birth Countries			102	102	

Notes: This table displays the effects of the state history on protest inclination under different identification designs. Details of specification designs are available in each section.

Appendix Table C15: Effects of State History of Ancestry Country on Gender Inequality

	Instrumental Variable		Second-Generation Immigrants		Soviet Union
	(1)	(2)	(3)	(4)	(5)
Panel A: When jobs are scarce, men should have more right to a job than women.					
$\widehat{LogStateAge}$	0.304***				
	(0.006)				
$\widehat{CentralizedStatehoodIndex}$		1.248***			
		(0.025)			
Ancestry Country's Log State Age			0.020***		
			(0.003)		
Ancestry Country's Centralized Statehood Index				0.091*	
				(0.045)	
𝟙(Age 15 - 25 in 1991) × Soviet Union Countries					0.043
					(0.038)
Observations	412,172	412,172	5,110	5,110	43,307
# Unique Birth Countries	77	77	39	39	35
# Unique Parent's Birth Countries			93	93	
Panel B: Men make better business executives than women do.					
$\widehat{LogStateAge}$	0.307***				
	(0.011)				
$\widehat{CentralizedStatehoodIndex}$		1.220***			
		(0.044)			
Ancestry Country's Log State Age			0.035**		
			(0.013)		
Ancestry Country's Centralized Statehood Index				0.270*	
				(0.131)	
𝟙(Age 15 - 25 in 1991) × Soviet Union Countries					0.043
					(0.038)
Country × Survey Year FE	✓	✓	✓	✓	✓
Birth Year FE					✓
Individual Controls	✓	✓	✓	✓	✓
Observations	207,047	207,047	3,980	3,980	43,307
# Unique Birth Countries	77	77	39	39	35
# Unique Parent's Birth Countries			93	93	

Notes: This table displays the effects of the state history on gender inequality under different identification designs. Details of specification designs are available in each section. Panel A's outcome variable is whether respondents think men should have more right to a job than women when jobs are scarce. Panel B's outcome variable is whether respondents think men make better business executives than women do.

Appendix Table C16: Heterogeneous Effects of State History on Protests By Internet Coverage

	(1)	(2)	(3)	(4)
Log State Age × Weighted Mobile Coverage Rate	0.034**		0.229***	
	(0.016)		(0.083)	
Centralized Statehood Index × Weighted Mobile Coverage Rate		0.158*		1.405**
		(0.095)		(0.678)
Country and Year FE			✓	✓
Country × Survey Year FE	✓	✓		
Birth Year FE	✓	✓		
Individual Controls	✓	✓		
Observations	63,059	63,059	5,898	5,898
# Unique Birth Countries	92	92	153	153

Notes: This table displays the heterogeneous effects of state history on protest intensity by mobile Internet's coverage rate, on an individual level Columns (1) and (2)and on a country level (Columns (3) and (4)). The specifications for individual-level regressions are the same as in Table 9. Country-level protest data comes from the GDLET, which measures the protest intensity on a country-by-year level. The specifications for country-level regressions control for the country fixed effects and the year fixed effects. Standard errors are clustered at the country level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.