

# DESPOTIC INSTITUTIONS, CULTURE, AND COUNTRIES' DEVELOPMENTAL TRAJECTORIES<sup>1</sup>

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Cultural traits of conformity and impersonal prosociality are increasingly linked to innovation, institutional quality, or economic growth, therefore strengthening the idea that countries' developmental trajectories are determined by “deep rooted” factors. However, our understanding about why these cultural traits are so different across and within societies remains limited. This paper traces back the evolution of conformity and impersonal prosociality to the existence of pre-modern despotic institutions. Leveraging historical data on ancestral ethnic groups and major European, West Asian, and North African cities, I show that societies where rulers historically faced limited constraints to the exercise of power show stronger social conformity and weaker impersonal prosociality today. Moreover, by showing that these cultural traits mediate the effect of despotic institutions on innovation rates, institutional quality, and economic development, I provide empirical evidence on how this cultural evolutionary process has shaped countries' developmental trajectories.

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## I. INTRODUCTION

The extent to which individuals feel compelled to follow social norms and engage in prosocial behaviors with strangers appears to be linked with countries' innovation rates, institutional quality, and economic growth (Mokyr 2016; Gorodnichenko and Roland 2017; Cline and Williamson 2017; Chua, Huang, and Jin 2019; Enke 2019). While this body of research increasingly suggests that countries' developmental trajectories are tied to “deep rooted” cultural factors, we are just starting to understand what made these traits so different across and within societies (Schulz et al. 2019; Henrich 2020).

This paper advances and empirically tests a cultural evolutionary hypothesis that links cross- and within-country variation in conformity and impersonal prosociality with historical exposure to despotic institutions. I begin by considering the anthropological and historical accounts characterizing despotic societies where rulers faced minimal institutional constraints to exercise their power, including not only early modern European autocratic states, but also many historical ethnic groups across all continents that developed different forms of hereditary succession (Poggi 1978; Miller 1990; Earle 1997; Flannery and Marcus 2012).

These societies presented rigid hierarchical structures, where a hereditary ruler exerted nearly absolute authority and control. While the ruler was revered—and considered, oftentimes, a descendant of a divine or supernatural entity—, the privileges and obligations of subjects were determined by kinship lines or social classes. Hence, social structure was sharply defined and failing to behave accordingly meant punishment by the state apparatus and the rest of society. Moreover, most of the means of production in the economy were controlled by the ruler, and economic surplus, usually obtained by exploiting lower strata, was used to fund the bureaucratic apparatus, support the security forces, or promote the ideology and religious institutions that were necessary to solidify ruler's control. Ritual and symbolism were indeed embedded in the basic functioning of the society: they not only helped rulers sustain their legitimacy and that of their bloodline, but also entrenched and legitimized a marked inequality in the basic principles of the social order.<sup>2</sup> Examples include the ceremonies of the Tu'i Tonga, the characteristic clothing of Hawaiian chiefs, the sacrifices and processions of Peruvian societies, the esthetic deformations and burials of Mexican tribes, and the coronation of French monarchs.

Being under this kind of despotic rule had two major consequences for human culture. The first one was the development of a strong preference for social conformity. As the pressures to conform with normative expectations in despotic societies made conformity fundamental for social acceptance, the resulting payoffs of being conformist under despotic rule would have provided this trait with an important relative advantage (Boyd and Richerson 1985; Gavrilets and Richerson 2017). The second consequence was the decay of impersonal prosociality. Social stratification, rigidity, and to some extent, opposite interests in preserving or changing the social order paved the way for social fractionalization, ingroup favoritism, group conflict, or discrimination, eventually weakening impersonal prosociality (Alesina and Ferrara 2005; Algan, Hémet, and Laitin 2016; Henrich 2020).

This work empirically tests both ideas by relying on two complementary analyses from different historical realities: (i) the presence of hereditary political elites in ancestral ethnic groups and (ii) the exposure to absolutist monarchies in Europe, West Asia, and North Africa

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<sup>2</sup> See Rappaport (1979) and Rossano (2012) for a general discussion on how ritual shapes social organization.

between 800 and 1800. The former hinges on the Ethnographic Atlas (EA) and the Standard Cross-Cultural Sample (SCCS) (Murdock 1967), while the latter leverages historical data of major European, West Asian, and North African cities (De Long and Shleifer 1993; Bosker, Buringh, and van Zanden 2013).<sup>3</sup>

The analysis starts by bolstering the assumption that political institutions are primitive. First, I show that geographic factors contribute to the emergence of hereditary political elites, as predicted by the appropriability (Mayshar, Moav, and Pascali 2022) and circumscription (Carneiro 1970) hypotheses. Second, I explore whether despotic institutions, rather than shaping, were likely to appear because populations had a tendency for obedience and conformity, a prevalent hypothesis in social psychology (Duckitt 1989; Kemmelmeier et al. 2003). After showing that culture is unlikely to be a determining factor in the formation of despotic institutions, I offer some quantitative evidence on the social dynamics of societies with hereditary and absolutist rulers. More precisely, I find that ancestral ethnic groups with hereditary leadership were more likely to have developed stratification, slavery, higher levels of social rigidity, and stronger conformity with social norms. Also, building upon the idea that absolutist rulers exerted social control by limiting access to information and knowledge (e.g., Eisenstein, 1980), I show that absolutist rule exerted a negative effect on book production and consumption in Modern Europe. The results remain significant after controlling for literacy rates and development.

Next, I turn to test the main hypothesis of this paper: conformity and impersonal prosociality have evolved because of the lack of institutional constraints to ruling elites. For this purpose, I start by building country-level historical estimates of both hereditary political succession and exposure to absolutism. The former measure hinges on the EA data and is built by leveraging language trees, data on the global distribution of languages, and contemporaneous population estimates. The latter resorts to the historical city data and is calculated as country-level population-weighted averages of the number of years each country's cities were under the control of an absolutist government. These measures are used to perform country-level analyses, where conformity is proxied through cultural restraint, individualism, looseness, embeddedness, intellectual autonomy, and affective autonomy; and impersonal prosociality is proxied through generalized trust, blood donations, parking violations, nepotism, particularism, and fairness.

Additionally, I exploit the variability in political institutions across Italian cities introduced by the emergence of city-states in a territory that shared religion and culture for many centuries. These analyses use exposure to absolutism as independent variable and four different dependent variables: total bank deposits per capita, total bank loans per capita, total number of nonprofit associations per capita, and the presence of an organ donation organization. Finally, I perform individual-level analyses where social conformity and impersonal prosociality are proxied through a diverse set of representative values and behaviors (e.g., the pursuit of social order and stability, and respect for traditions). The results offer wide support for the theory.

A wide array of additional analyses and robustness checks further validate the findings. Regarding the country- and city-level analyses, I perform sensitivity analyses to the presence of omitted variable bias (Oster 2019; Masten and Poirier 2023); supplementary estimations with additional religious, social, demographic, economic, and political covariates; and

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<sup>3</sup> The EA contains anthropological and cultural data of 1,265 ethnic groups around the world (Murdock 1967). The Standard Cross-Cultural Sample (SCCS) is a reduced EA sample (186 societies) for which a higher number of cultural data are available.

additional specifications with composite indexes of conformity and impersonal prosociality as dependent variables. At the individual level, I also sought to facilitate the causal interpretation of these findings in several ways. First, several analyses leverage the epidemiological approach (Fernández 2007; Giuliano 2007) to exploit existing within-country variation in the degree to which migrants' and second-generation migrants' country of origin is linked to historical hereditary succession and absolutism. These estimations include host country fixed effects to mitigate concerns about the potential confounding effects of country-level institutional, geographic, and other cultural characteristics. Second, I matched another subset of individuals with historical ethnic groups through self-reported ethnicities. In addition to country fixed effects, these estimations include language sub-family fixed effects to mitigate potential biases arising from common evolutionary processes across groups of ancestral ethnicities.

The paper concludes by exploring how despotic political institutions have shaped countries' developmental trajectories, that is, innovation, economic development, democracy, and institutional quality. In these analyses, I use the country-level measure of hereditary political succession (available for a wide array of countries across all continents) to assess how despotic institutions impact economic development through a historical dynamic analysis between 1500 and 1950. The results show that the effect of hereditary succession on population density, urbanization rates, and built-up area becomes negative and significant only after the 18<sup>th</sup> century. I argue that these patterns reflect, precisely, the significant impact of despotic institutions on conformity and impersonal prosociality.

This work speaks to different literatures. First, by offering an explanation for current cross- and within-country differences in social conformity and impersonal prosociality, it joins a nascent stream of multidisciplinary research investigating the origins of global differences in cultural traits (Fincher et al. 2008; Alesina, Giuliano, and Nunn 2013; Van de Vliert 2013; Galor and Özak 2016; Enke 2019; Schulz et al. 2019; Götz et al. 2020). These studies have shed light on how the evolution of a diverse array of cultural traits, including time preferences, moral systems, and individualism, is contingent on historical family ties, religion, agriculture, climate, geography, or exposure to diseases.

Additionally, it joins recent efforts that have sought to understand the consequences of societies' historical political economy, a literature that has mainly focused on understanding the origins of modern democratic institutions (Giuliano and Nunn 2013; Bentzen, Hariri, and Robinson 2019; Benzell and Cooke 2021). Research has traditionally argued that institutions have played a major role in shaping countries' developmental trajectories (North 1990; Bueno De Mesquita, Smith, and Siverson 2004; Greif 2006; Acemoglu and Robinson 2012; Engerman and Sokoloff 2012). Beyond providing empirical evidence of the persistence effects associated with despotic institutions, this work offers a complementary consequence: despotic institutions prevented the development of a particular set of cultural traits that are conducive to institutional and economic development. More broadly, this work contributes to the ongoing task of developing a comprehensive understanding of the deep roots of countries' developmental trajectories (Spolaore and Wacziarg 2009; Tabellini 2010; Michalopoulos and Papaioannou 2013; Gorodnichenko and Roland 2017; Schulz 2022).

The remainder of the article is organized as follows. Section II introduces the data and empirical analyses. Section III discusses the origins of despotic political institutions. Section IV addresses the relationship between hereditary succession and social structure in ancestral ethnic groups. Section V explores the effect of exposure to absolutism on the production and consumption of books in Early Modern Europe. Section VI explores the effect of hereditary succession and exposure to absolutism on conformity and impersonal prosociality at the country, city, and individual levels. In Section VII, I address the relationship between hereditary

succession, social conformity, and countries' developmental trajectories. Finally, Section VIII offers a brief conclusion.

## II. EMPIRICAL STRATEGY

In this section, I introduce the historical measures of historical hereditary succession and exposure to absolutism, also explaining the calculation of country-level estimates. I then outline the different empirical analyses.

### *II.A. HISTORICAL HEREDITARY SUCCESSION*

To collect information regarding historical rules of political succession for the office of headman, I hinge on the Ethnographic Atlas, a database detailing the social practices and structures of 1,265 pre-industrial societies (Murdock 1967). I create a binary variable – hereditary succession – that takes the value of 1 when succession to the society's office is hereditary and 0 otherwise. This variable is used in ethnic analyses, including those leveraging the extended cultural data in the SCCS. For contemporaneous analyses at the country and individual levels, I exploit the EA to obtain country-level estimates of the % of the population with ancestors who lived in societies characterized by hereditary succession. For this purpose, I relied on language trees, data on the global distribution of languages, and contemporaneous population estimates (following Schulz et al., 2019 and Bahrami-Rad et al., 2021). Figure I shows the distribution of historical succession across modern countries.

### *II.B. EXPOSURE TO ABSOLUTISM*

The measure of exposure to absolutism leverages historical data of European, West Asian, and North African cities in the period 800-1800. For country-level historical analyses, I calculate the percentage of the population that lived in cities under the rule of an absolutist monarch for each 100-year period between 800-1800. For contemporaneous country-level analyses, I calculate a population-weighted average of the total number of years a country's cities were under absolutist rule between 800 and 1800. For city-level analyses, exposure to absolutism is calculated as the total number of years each city was under absolutist rule between 800 and 1800. Data on city population and whether a city was under the control of an absolutist monarch are obtained from Bosker et al. (2013), who extended the work of De Long and Shleifer (1993) and Bairoch et al. (1988). Figure II shows the variability in exposure to absolutism across Modern Countries in Europe, North Africa, and Southwest Asia.

### *II.C. ANALYSES*

The empirical analysis begins by bolstering the assumption that despotic political systems are primitive. First, I build on the appropriability and circumscription hypotheses (Carneiro 1970; Mayshar, Moav, and Pascali 2022) and assess the impact of (i) the potential yields of cereals relative to that of roots and (ii) the % of fertile land on the likelihood that ancestral ethnic groups had hereditary succession as a form of political succession. Furthermore, I leverage folklore data (Michalopoulos and Xue 2021) to test whether collectivist cultural traits explain the emergence of hereditary succession (Duckitt 1989; Kemmelmeier et al. 2003).

The next part of the paper aims to offer some quantitative evidence on the social dynamics of societies with hereditary and absolutist rulers. In Section IV, I estimate the effect of hereditary succession on the existence of slavery, stratification, social rigidity, and normative compliance

in historical ethnic groups. These analyses hinge on the EA – from which I leverage data on slavery and stratification – and the SCCS – from which historical information on social rigidity and normative compliance is retrieved. In Section V, I resort to the idea that social control has historically implied limiting individuals’ access to information and knowledge (e.g., Eisenstein, 1979) and assess the effect of exposure to absolutism on book production and consumption in Europe between 1500 and 1800. These longitudinal analyses include country and year fixed effects. Data on the production and consumption of books is gathered from Baten and van Zanden (2008).<sup>4</sup>

In Section VI, I turn to address the main hypothesis of this work: the evolution of conformity and impersonal prosociality is related to the presence of historical despotic systems. First, I resort to country-level analyses where (i) conformity is proxied through Hofstede’s restraint and individualism indexes, cultural looseness, and Schwartz’s embeddedness, intellectual autonomy, and affective autonomy indexes; and (ii) impersonal prosociality is proxied through generalized trust, blood donations, parking violations, nepotism, particularism, and fairness. Second, I perform city-level analyses that exploit the variability in the forms of government in Italian cities. These analyses use exposure to absolutism as independent variable and four different dependent variables: total bank deposits per capita, total bank loans per capita, total number of nonprofit associations per capita, and the presence of an organ donation organization. Third, I hinge on the World Value Survey (WVS) to carry out cross-country individual-level analyses where social conformity and impersonal prosociality are proxied through a diverse set of representative values and behaviors (e.g., the pursuit of social order and stability, and respect for traditions). All these analyses use hereditary succession and exposure to absolutism as independent variables. Also, to strengthen the causal interpretation of these results, I perform a wide array of additional analyses at the country and individual levels.

Finally, in Section VII, I exploit global cross-country variability in the modes of political succession of ancestral ethnic groups to explore how despotic political institutions have shaped countries’ developmental trajectories. I do so through two complementary approaches. On the one hand, I perform a dynamic historical analysis between 1500 and 1950. These analyses proxy historical development through population density, urbanization rates, and total built-up area. Data is retrieved from the HYDE project. On the other hand, I perform mediation analyses where conformity and impersonal prosociality mediate the relationship between historical hereditary succession and (i) innovation, (ii) economic development, (iii) democracy, and (iv) institutional quality.

### III. THE ORIGINS OF DESPOTIC INSTITUTIONS

If one considers culture from a broad perspective, deep institutional features such as despotism would be passed down through generations as part of “cultural packages” that include complementary beliefs, values, practices, preferences, or institutions. In this paper, I take a narrow approach to culture, where I distinguish it from institutions (Gorodnichenko and Roland 2017; Enke 2019; Buggle and Durante 2021). To be sure, this perspective does not reject that institutions and culture hold a tight relationship in which one influences the other; it simply recognizes that the effects of particular institutional features on culture (and vice versa) can be

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<sup>4</sup> Baten and Van Zanden (2009) provide data for every 50 years beginning in 1475. To obtain data for the years 1500, 1600, 1700, and 1800, we just take the simple average of the preceding and following observations. To illustrate, book production in 1500 is calculated as the average of book production in 1475 and 1525.

identified. Congruent with this perspective, this section aims to lend some credence to the idea that despotism can be considered a primitive feature of societies.

To begin with, research suggests that the creation of despotic political institutions is partially explained by geographic factors. Recent evidence has shown that states have emerged in places where agriculture relied on cereal cultivation because cereals, unlike roots, are storable, distributable, and taxable (Mayshar, Moav, and Pascali, 2022). This appropriability condition allowed the emergence of an elite, as well as the instruments that enabled the latter's legitimation and subsistence, such as armies, bureaucracies, and rituals. Hence, in contrast with early theories of state formation that regarded surplus as a central factor, differences in land suitability between crops that can be stored and those that cannot led to the emergence of social hierarchies.

Another stream of inquiry has pointed to the distribution of fertile land. Dow and Reed (2013) posit that differences in land quality lead to the emergence of hereditary elites because those established in the most fertile locations exclude others from food access. Their perspective, despite invoking different mechanisms, echoes the basic arguments of circumscription theory (Carneiro 1970). This theory posits that states appear in places where locations of high fertility are circumscribed by unproductive land. The reason is that, after group conflicts, areas with only a small portion of fertile land will limit the migration options of defeated populations. The latter are therefore willing to accept subjugation in exchange for being allowed to remain in the fertile area. Accordingly, the emergence of hereditary elites will be negatively related to the proportion of fertile land in an area.

While these ideas about the origin of the state are now well-established in economics, the field of social psychology proposes an alternative perspective where despotism might stem from collective inclinations that push individuals towards group conformity and compliance (Duckitt 1989; Kemmelmeier et al. 2003). First, despotic societies prioritize adherence to group expectations and deference to authority, something that might be a cultural adaptation from collectivism's emphasis on group cohesion, obedience, and tradition. Second, the emphasis on group commitment and collective interests over self-interest plays a pivotal role in the ideological basis of despotic political systems—traits that are also central in collectivist societies. Importantly, if one shifts the perspective to individualist values, which emphasize independence and autonomy, the same arguments suggest that individualism would act as a deterrent for the establishment of despotic institutions. Overall, despotic institutions could be an outcome, rather than a cause, of specific cultural traits.

Empirically, I hinge on the EA to test these ideas. For the “geographic hypothesis”, I leverage data on (i) the potential yields of cereals relative to that of roots (Mayshar, Moav, and Pascali 2022) and (ii) the % of fertile land (Ramankutty et al. 2002). For the “cultural hypothesis”, I hinge on the traditional folklore of the ancestral ethnic groups. Traditional folklore is the collection of oral stories and tales that represent the customs and beliefs of a society. Yuri Berezkin, an anthropologist and folklorist, curated a comprehensive dataset encompassing 2,564 motifs derived from the traditional folklore of 958 world societies. Berezkin's dataset is uniquely focused on preserving stories untouched by modernization and, therefore, these stories should be thought of as capturing the customs and beliefs of preindustrial societies. The data comes from Michalopoulos and Xue (2021), who harnessed Berezkin's catalog by employing text analyses to construct a dataset that systematically codes the presence of diverse economic, behavioral, psychological, and other cultural concepts in each society's oral tradition. Therefore, I proxy the degree of collectivism and individualism in ancestral ethnic groups through, respectively, the ratio of collective-related motifs to total motifs and the ratio of individual-related motifs to total motifs.

Table I shows the estimation results. Because the dependent variable is binary, logit models are used. Beyond the raw estimates, Table I also reports the size effect for each coefficient, that is, the odds ratios obtained after exponentiating and rescaling the coefficient in log odds. These size effects represent the probability increase in % associated with a unit increase in the independent variables. Columns (1)-(4) present different specifications with the relative potential yields of cereals and the % of fertile land as independent variables, while estimations in columns (5)-(8) explore the effect of collective-related and individual-related motifs on the likelihood that societies' form of political succession is hereditary. Columns (4) and (8) include continental fixed effects. Finally, column (9) includes all the independent variables together and column (10) further adds continental fixed effects.

In sum, the results suggest that the emergence of hereditary elites is driven, at least partially, by geographic factors. Considering the results of column (9), a 1sd increase in the potential yields of cereals relative to that of roots raises the likelihood of a society adopting hereditary succession by around 50%. Additionally, a 1sd increase in the % of fertile land reduces this likelihood by around 30%. This is consistent with the arguments above. Regarding the “culture hypothesis”, the estimates of culture-related and individual-related motifs are not statistically significant. Nevertheless, it is worth noting that the coefficients show the predicted sign: the intensity of collective-related (individual-related) motifs is positively (negatively) related to the presence of hereditary succession. This suggests that, while there may be some slight influence of collectivist and individualist traits on the development of despotism, it is not strong enough to assume that despotism mainly stems from cultural traits. Thus, the results favor a geographic hypothesis to explain the emergence of despotic institutions, providing support for the assumption that despotic institutions are primitive.

#### IV. HEREDITARY POLITICAL SUCCESSION AND SOCIAL STRUCTURE IN ANCESTRAL ETHNIC GROUPS

This section explores the social structure of ancestral ethnic groups with hereditary succession. Below, I begin by reviewing the arguments in the economics and anthropological literatures about why stratification, slavery, social rigidity, and social compliance flourished in societies with hereditary elites.

##### *IV.A. STRATIFICATION, SLAVERY, SOCIAL RIGIDITY, AND COMPLIANCE IN ANCESTRAL ETHNIC GROUPS WITH HEREDITARY POLITICAL SUCCESSION*

As seen before, research suggests that hereditary elites appeared after some individuals were able to establish exclusive rights to the control and use of the most productive land (Dow and Reed 2013). These landowners obtained rents by forcing commoners—who possessed no property—to work on their land, prompting the accumulation of surplus in the hands of a small fraction of society. The growing economic differences between landowners and commoners turned the former into economic and political elites—who were able to remain in power because of the inter-generational transmission of land property rights.<sup>5</sup> A salient example of

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<sup>5</sup> Agricultural land was the economic backbone of preindustrial societies and, therefore, controlling the most productive fields was a major factor in the development of inequality (Dow and Reed, 2013). Also, property rights over land were necessary for the taxation of commoners and the accumulation of surplus that allowed hereditary political elites to remain in a privileged position. Without control over agricultural land, elites would not have been able to accumulate the resources that were necessary to establish a bureaucratic apparatus, support security forces, develop productive infrastructure, or promote their preferred ideology and religious institutions.



this process can be seen in the Hawai’ian society, whose hereditary political elite institutionalized a marked social stratification by eliminating the possibility that commoners held land property rights (Kirch 2010).

Inequality in property rights might have been instrumental for some societies, but anthropological accounts reveal that it was not a necessary condition for the emergence of stratification. Some societies experienced stratification processes where the ideological component seemed to have been much stronger than the development of exclusive land rights (Flannery and Marcus 2012). The Tahitian society, while presenting a ranked social hierarchy, had an intermediate social category between elites and commoners – the ari’i ri’i – who could hold property rights over agricultural land. It was, instead, the belief that elites were direct descendants of the gods Hina and Ti’i, in turn, what legitimized the inequality across social layers in the control and use of resources.

Occasionally, the process of stratification paved the way for an even higher level of institutionalized inequality where people could be considered property: slavery. A first alternative for the development of such social order could have been that stratification was pushed to the extreme by elites to obtain even more surplus from cheaper labor (Siegel 1945; Rousseau 1979). Slavery could have also been a byproduct of the social stratification process and, more precisely, of the lack of resources of those at the lower end of the social continuum (Testart 2002; Flannery and Marcus 2012). As famines or debts hit already impoverished individuals, they might have been willing to sell themselves or members of their families to the elites in return for shelter, food, or money. In other societies, slavery seems to have originated in the cosmology of society. For instance, the Kayans of Borneo believed that “slaves deserved their inferior position because of their original misbehavior” (Rousseau, 1979: 129).

Regardless of the degree of social stratification achieved in despotic societies, the presence of hereditary political elites was bound to result in a rigid social structure with the hereditary chief holding the sole right to authority. Privileges (and obligations) were assigned according to the social role they occupied, and individuals were expected to follow the conventions of their social position tightly (Earle 1997; Flannery and Marcus 2012).

#### *IV.B. EMPIRICAL EVIDENCE*

As baseline evidence for these arguments, I start by exploring the unconditional mean differences in stratification, slavery, social rigidity, and strong social conformity between societies with and without hereditary political succession.<sup>6</sup> Each of these outcomes is a binary indicator that takes the value of 1 when the cultural trait is present in the society and 0 otherwise. Figure III plots these differences as percentages of a standard deviation with their respective standard errors. Even with this rough comparison of means, it is evident the significant differences in the social structure of societies with hereditary political elites: stratification, slavery, social rigidity, and strong social conformity are 23%-91% of a standard deviation higher.

Table II shows the estimation results. Panel A shows the relationship between hereditary succession and property rights. Panel B, C, D, and E focus, respectively, on social stratification, slavery, social rigidity, and strong social conformity. Given that the outcomes are binary variables, logit models are employed.

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<sup>6</sup> Analyses using stratification and slavery as dependent variables hinge on the EA. On the other hand, those involving social rigidity and strong social conformity leverage information in the SCCS.

Column (1) explores the unconditional relationship between hereditary succession and each of these normative aspects. For all dependent variables, the results show a positive and significant relationship. Column (2) introduces four ethnographic controls, namely, the political jurisdictions at the local and above local levels, the intensity of folklore related to the “collective”, and dependence on agriculture. The first set of covariates controls for the fact that jurisdictional hierarchy at the local and supra-local level can take different forms (e.g., nuclear family vs clans, autonomous bands vs large states), which might explain part of the existing variance in societies’ normative aspects. Furthermore, I account for the importance the collective has historically had for each society, as this could have driven the formation of impersonal prosociality and, especially, conformity. I do this by introducing the intensity of collective-related motifs in societies’ folklore as a covariate. Finally, dependence on agriculture is included to account for the potential impact of subsistence modes in the culture of societies. Besides this set of controls, column (3) includes continental fixed effects. The estimates in Table II show that the positive relationship between hereditary succession and the five dependent outcomes remains significant after accounting for these covariates and including continental fixed effects.

Importantly, in addition to being statistically significant, the size effects (the odds ratios obtained after exponentiating and rescaling the log odds, also reported in Table II) reveal that the relationships are economically meaningful. Precisely, the presence of hereditary political succession raises the likelihood of a society having stratification, slavery, social rigidity, and strong social conformity by 141%, 92%, 3156%, and 255%, respectively.

#### *IV.C. ADDITIONAL ANALYSES*

In Appendix B, I perform a set of additional analyses to ensure the robustness of the results. First, I calculate Oster's  $\delta$  (Oster 2019) and the sign change breakdown point ( $\delta$  breakdown) at which the  $\beta$  of the independent variable changes sign (Masten and Poirier 2023) to assess the sensitivity of the estimates to the presence of omitted variable bias. Furthermore, I perform alternative estimations that include additional control variables, language sub-family clustered standard errors, spatial autocorrelation, and country fixed effects.

### V. ABSOLUTISM AND SOCIAL CONTROL IN EARLY MODERN EUROPE

#### *V.A. THE PRODUCTION AND CONSUMPTION OF BOOKS UNDER ABSOLUTIST RULE*

The invention of the printing press in the 15<sup>th</sup> century changed our relationship with knowledge. It meant the mass production of books, affordable access to learning, the accumulation of human capital, the dissemination of new ideas, cultural dynamism, innovation, and technological change. Unsurprisingly, access to the printing press, book production, and book consumption seem to explain differential rates of development across and within countries in early modern Europe (Baten and van Zanden 2008; Dittmar 2011).

However, to the same extent that the development of the printing press sowed the seeds of economic growth, the social and economic changes embedded in this process threatened the legitimacy of despotic societies. By fostering discussions around egalitarianism, individual rights, or freedom, the printing press enabled political reformers and critical scholars to challenge the idea that hierarchical social structures and inequality were legitimate and, much less, necessary (Eisenstein, 1979).

In response to this threat, those in power sought to exert control over what was printed and what people could read (Stone 1969; Midura 2021).<sup>7</sup> As a result, the printing press became a tool for absolutist governments to spread the ideology that most favored their interests. While philosophical essays, political pamphlets, and satirical journals that questioned the status quo were often forbidden, religious texts, government publications, literary works, and educational materials that reinforced the established order were promoted and disseminated.<sup>8</sup>

I posit that a direct consequence of these stringent censorship laws was a lower production and consumption of books. These laws meant not only that individuals were not free to express their ideas, but also that strong punishment would accrue when involved in the circulation or consumption of censored books. Economic arguments on the supply side are also important, for authors publishing books that satisfied the interests of the state were likely to obtain higher financial support and patronage.<sup>9</sup> Overall, finding a significant effect of absolutism on the production and consumption of books would hint at the success of despotic monarchs in establishing and maintaining social control over their populations.

#### *V.B. EMPIRICAL EVIDENCE*

Table III provides evidence of the impact of absolutist rule on book production (Panel A) and consumption (Panel B). Data is taken from Buringh and Van Zanden (2009). The longitudinal nature of these data allowed me to estimate country-year fixed-effect regressions for the period 1500-1800.

Column (1) explores the unconditional relationship between the proportion of people in a country under absolutist rule and the corresponding dependent variable. The results of Panel A and B show a negative and significant relationship. Columns (2) and (3) introduce, respectively, literacy rates and population density (as a proxy for development) as covariates. Column (4) includes a set of city-level covariates: the proportion of people living in cities that host a university, the proportion of people living in cities that are the seat of a bishop, and the proportion of people living in cities that are the seat of an archbishop. Finally, column (5) includes all the previous covariates together. In all specifications, the results are statistically significant and economically meaningful. More precisely, after including all covariates, a 1sd deviation in the proportion of people under absolutist rule implies a reduction of 0.44% and 0.35% in the production and consumption of books.

#### *V.C. ADDITIONAL ANALYSES*

Beyond including literacy rates and population density as covariates, I perform several additional analyses. These are shown in Appendix C. First, I calculate Oster's and Masten and Poirier's  $\delta$ s (Oster, 2019; Masten and Poirier, 2022) to assess the sensitivity of the estimates to

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<sup>7</sup> This control could be directly or indirectly exerted. For instance, the English held direct control over printing until 1557, when it granted Stationers Company a monopoly.

<sup>8</sup> The reciprocal interest of the church and the state in strengthening social control could have made some absolutist governments even more willing to embrace censorship. One prominent case is the relationship between the Spanish Crown and the Catholic Church in the 16<sup>th</sup> century. For instance, the Spanish Empire, in 1512, promulgated the Laws of Burgos. Based on a strong religious ideology, these laws were designed to regulate the behavior of Spaniards in the newly conquered territories of the Americas. The implementation of these laws included strong mechanisms of social control over what indigenous people could read and learn.

<sup>9</sup> For a discussion on how the variety of genres and styles increased with the emergence of press freedom in the Netherlands, France, and England see Burrowes (2011).

the presence of omitted variable bias. Second, I include alternative specifications that account for spatial correlation. Finally, note that, because population data are only available for cities with at least 5000 inhabitants, our population-weighted measure of exposure to absolutism only employs data on major cities. To assess whether this might be a source of bias, I perform additional estimations with an alternative measure: the percentage of total cities that were under absolutist rule each year. Results remain similar.

## VI. DESPOTIC POLITICAL INSTITUTIONS, CONFORMITY AND THE EVOLUTION OF CULTURE

In this section, I address the main propositions of this work: despotic political institutions have shaped the evolution of conformity and impersonal prosociality. For this purpose, I perform different analyses at the country, city, and individual levels. At the country level, conformity is proxied through cultural restraint, individualism, looseness, embeddedness, intellectual autonomy, and affective autonomy. Impersonal prosociality, meanwhile, is proxied through generalized trust, blood donations, parking ticket violations, nepotism, particularism, and fairness.

In city-level analyses, I focus on the existence of impersonal prosociality, using four different dependent variables: bank loans per capita, bank deposits per capita, the number of nonprofit organizations per capita, and the existence of organ donation organizations.

In individual-level analyses, I consider a set of individual values and behaviors that are representative of conformity and impersonal prosociality. Individuals with stronger conformity tend to (i) be less independent; (ii) attach more importance to behaving properly; (iii) show higher respect for traditions; (iv) see obedience as an important quality in children; and (v) follow norms to a greater extent; (iii). On the other hand, impersonally prosocial individuals tend to (i) be fairer with strangers; (ii) trust others to a greater extent; (iii) not show differential rates of trust between the in-group and the out-group; and (iv), not resort opportunistically to friends or family to obtain a preferential trait in social or economic situations.<sup>10</sup>

### VI.A. EMPIRICAL EVIDENCE AT THE COUNTRY LEVEL

Figures IV and V show the unconditional mean differences in conformity and impersonal prosociality between strongly despotic and weakly despotic societies.<sup>11</sup> The independent variables in Figures IV and V are, respectively, hereditary succession and exposure to absolutism. These differences are shown as percentages of a standard deviation with their respective standard errors. The results show that strongly despotic societies are more conformist and lower impersonally prosocial than weakly despotic societies.

Tables IV and V show the country-level estimates for hereditary succession and exposure to absolutism. The main estimations include previous ethnographic controls (political jurisdictions at the local and above the local levels, the intensity of folklore related to the “collective”, and historical population density) and a set of contemporaneous covariates – ethnic fractionalization, linguistic fractionalization, and genetic diversity– that played an

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<sup>10</sup> Some of these variables are only used in additional analyses because of the additional information included in the ESS.

<sup>11</sup> Strongly despotic societies are those for which hereditary succession or exposure to absolutism take above-average values. Conversely, weakly despotic societies are those for which these variables take below-average values.

important role in the evolution of conformity and impersonal prosociality (Alesina and La Ferrara 2005; Ashraf and Galor 2013; Siegel, Licht, and Schwartz 2011). Additionally, the estimations with exposure to absolutism as independent variable include previous city-level covariates, namely, historical exposure to universities, bishops, and archbishops. Tables IV and V also present additional specifications with (i) no control variables, (ii) only ethnographic controls, and (iii) continental fixed effects.

Figure VI presents graphically the results. They show that countries with tighter historical links to hereditary succession or absolutism show, nowadays, higher restraint, lower individualism, lower cultural looseness, higher embeddedness, lower intellectual autonomy, and lower affective autonomy. These countries also present reduced trust, lower fairness, lower blood donations to non-family, increased nepotism, and higher particularism. More precisely, an increase in 1sd of historical hereditary succession implies a change of 31-125% of a standard deviation in these dependent variables. Meanwhile, an increase in 1sd of exposure to absolutism involves a change of 34-75%.

I further explore the results by looking at the marginal effects of historical hereditary succession and exposure to absolutism at different values of this variable's standard deviation. Figure VII represents graphically the average marginal effects of hereditary succession and their respective confidence intervals for the cultural variables that proxy for conformity. These marginal effects are consistently significant, therefore suggesting that the effects of hereditary succession and exposure to absolutism on conformity and prosociality are not conditioned on the values the former take. The marginal effects of specifications exploring the effect of hereditary succession on impersonal prosociality, as well as those of the specifications with exposure to absolutism as independent variable can be found in Appendix D. Findings are similar.

#### *VI.B. EMPIRICAL EVIDENCE AT THE CITY LEVEL*

The integration of the Kingdom of Italy within the Holy Roman Empire at the end of the 10<sup>th</sup> century left the Northern territories of the Italian Peninsula with little central authority. This triggered a process of political independence that would result a century later in the emergence of several independent city-states. At the same time, the Normans invaded the Southern part of Italy, establishing a robust state with centralized authority that ensured order and stability.

In contrast to the kingdom in the south of the Italian peninsula, the city-states formulated their regulations, laws, and official decisions in the name of the people, attributing political power to the populace rather than relying on religious authority or divine right. For instance, the actions of government officials were under the scrutiny of new political institutions, including courts of law, where citizens could appeal (Galizia 1951). Territorial disputes, internal conflicts, social upheaval, and the political ambitions of Spain and France—newly unified states that had become major political powers—ended these “democratic” experiences in the 16<sup>th</sup> century. In 1494, the French invaded the Northern Part of Italy. Forty years of war ended with France's defeat of France, the restoration of the Papal States, and the establishment of Spanish hegemony over most Italian territories.

The analyses of this section exploit the historical variability in Italian political institutions introduced by the emergence of city-states in a territory that shared religion and culture for many centuries. The main estimations include previous city controls (historical exposure to

universities, bishops, and archbishops) and regional fixed effects at the NUTS-1 level.<sup>12</sup> Table VI presents the results, which are shown graphically in Figure VIII.

Consistent with previous findings, exposure to absolutism reduces bank loans per capita, bank deposits per capita, the number of nonprofit organizations per capita, and the possibility that a city has an organ donation organization. Specifically, an increase in 1sd in exposure to absolutism implies a change of 10-61% of a standard deviation in these dependent variables.

#### *VI.C. EMPIRICAL EVIDENCE AT THE INDIVIDUAL LEVEL*

In this section, I perform individual-level cross-country analyses, which involve all individuals in the WVS regardless of their country of birth, parents' country of birth, or ancestral ethnicity. Tables VI and VII show, respectively, the estimates for hereditary succession and exposure to absolutism. The analyses include, in addition to ethnic and contemporaneous controls, a set of basic individual variables, namely, age, gender, and income, as well as wave fixed effects. The tables also include alternative specifications with (i) only wave fixed effects, (ii) ethnographic and contemporaneous controls, and (iii) continental fixed effects.

Figure IX shows graphically the results. They suggest that populations in countries with stronger links to hereditary succession or absolutism place less importance on the gratification of their needs and desires, are more likely to follow the rules, show lower individual autonomy, attach more importance to behaving properly, value tradition to a greater extent, and consider obedience an important child quality. These populations also show lower fairness, lower generalized trust, and higher levels of in-group trust (relative to the level of trust in the out-group).

To make a better sense of the magnitude of these results, let us consider the variation in these values and attitudes associated with an increase in hereditary succession from 0 to 1. That is, respectively, the two extreme cases where a country  $i$  has no historical links with hereditary succession—because no pre-industrial society in it has experienced this form of succession—and a country  $j$  in which all ancestral ethnicities have a history of hereditary succession. Given that (i) dependent and independent variables in the estimation are standardized and (ii) moving from 0 to 1 in the distribution of hereditary succession implies eight standard deviations, the estimates show that increasing hereditary succession from 0 to 1 results in a change of 10-99% of a standard deviation in attitudes and behaviors representative of social conformity and impersonal prosociality. By the same logic, the changes amount to 35-105% of a standard deviation when considering an increase from the minimum to the maximum number of years of exposure to absolutism.<sup>13</sup>

#### *VI.D. ADDITIONAL ANALYSES*

I perform a wide array of additional analyses to provide further evidence on the effect of hereditary succession and exposure to absolutism on conformity and impersonal prosociality. Regarding country-level analyses, I perform a set of sensitivity checks (Oster's and Masten and

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<sup>12</sup> NUTS stands for Nomenclature of Territorial Units for Statistics, a hierarchical system the EU employs to divide its territory. NUTS-1 regions usually have between 3 and 7 million inhabitants, while NUTS-2 regions have between 800,000 and 3 million.

<sup>13</sup> In the period 800-1800, the minimum number of years a country has been under absolutist rule is 400; the maximum number is 1100. Moving from the minimum to the maximum value implies, approximately, 3.5 standard deviations.

Poirier's delta) and build a wide range of alternative specifications controlling for potential confounding covariates such as historical development, the prevalence of diseases, religion, historical rice cultivation, historical conflicts, or kinship to assess the robustness of these results. Furthermore, building on the idea that the 12 dependent variables used in the analyses form two internally consistent systems of cultural traits, I create composite indexes of conformity and impersonal prosociality. Lastly, I explore the normality of residuals of the main regressions. All these analyses can be found in Appendix D.

Considering city-level analyses, I also perform a similar set of sensitivity checks and include specifications with additional geographic and economic covariates. These analyses are available in Appendix E.

Regarding the individual-level estimates, I perform a set of analyses that allow us to address causality concerns stemming from unobservable institutional, geographic, or ethnic characteristics by leveraging within-country differences in individuals' historical ancestries. First, I make use of the epidemiological approach (Fernández 2007; Giuliano 2007) to assess the effect of the country-of-origin's hereditary succession and exposure to absolutism on the conformity and impersonal prosociality of migrants and second-generation migrants. These analyses hinge on the European Social Survey (ESS) and include country-of-origin fixed effects. While ruling out the potential omitted variable bias stemming from country-level factors, this approach also makes it possible to control for the country-of-origin's political jurisdictions at the local and above the local levels, intensity of folklore related to the collective, and dependence on agriculture. Analyses involving second-generation migrants use three different samples: (i) when the respondent's mother is a migrant, (ii) when the respondent's father is a migrant, and (iii) when both, mother and father, are migrants. In the latter case, hereditary succession, exposure to absolutism, and the country-of-origin covariates are the simple average of the value these variables take in the mother's and father's country-of-origin.

Second, I leverage ethnicity data in the WVS and manually match respondents with their ancestral ethnicities. I employ only those responses in the WVS for which individuals' ethnicities can be straightforwardly matched with ethnicities in the EA. These estimations exploit within-country differences in the forms of political succession of ancestral ethnic groups. In addition to country fixed effects, these specifications include language-subfamily fixed effects to mitigate potential biases arising from common evolutionary processes across ancestral ethnicities.

Building also on the idea that all the individual attitudes and behaviors used as dependent variables are part of two internally consistent systems of psychological traits, I perform additional estimations with a composite index of conformity and impersonal prosociality as dependent variables. Finally, I perform alternative specifications of all individual-level estimations with a set of extended individual controls that includes health, marital status, and number of children.<sup>14</sup> All these analyses can be found in Appendix F.

## VII. DESPOTIC POLITICAL INSTITUTIONS, CULTURE, AND COUNTRIES' DEVELOPMENTAL TRAJECTORIES

This last section explores how despotic political institutions have shaped countries' developmental trajectories, that is, innovation, economic development, democracy, and

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<sup>14</sup> Because of informational constraints, the estimations hinging on the ESS data include, rather than the number of children, a dummy variable to account for whether the individual has ever had any children.

institutional quality. The analyses rely on the country-level measure of hereditary political succession, as it is available for a wide array of countries across all continents.

Recent research has made it clear that current levels of institutional and economic development are deeply rooted in the history of societies. While a first line of inquiry argues that ancient institutions precede countries' developmental trajectories because of the long-term persistence of institutional characteristics and the related economic outcomes, other studies have pointed at differences in cultural traits as an explanatory factor (North 1990; Tabellini 2010; Acemoglu and Robinson 2012; Alesina and Giuliano 2015; Gorodnichenko and Roland 2017; Schulz 2022). The main idea common to the last stream of research is that some cultural traits seem more conducive to innovation, high democratic quality, or institutional development. Taking together these somewhat separate insights suggests that despotic political institutions will have (i) a direct effect on countries' development because of the persistence of despotic institutions; and, (ii) an indirect effect that stems from the idiosyncratic evolution of conformity and impersonal prosociality. In order to explore empirically these ideas, I begin by performing a historical analysis of the effect of hereditary succession on economic development.

### *VII.A. HISTORICAL ANALYSES*

To assess whether hereditary forms of succession have had an impact on economic development, I resort to a country-level historical dynamic analysis (following Enke 2019).<sup>15</sup> More precisely, the dependent variable is regressed on historical hereditary succession for each available year between 1500 and 1950. To account for changes in the population structure and its impact on countries' developmental trajectories, I restrict the sample to those countries in which at least 50% of the population is native, according to Putterman and Weil (2010). Ethnographic covariates are also included in all regressions.<sup>16</sup> The analyses involve three different dependent variables: population density, urbanization rates, and total built-up area. These data are gathered from the HYDE dataset.

Figure X displays the results for historical population density. Each dot represents an estimate, and the y-axis indicates the magnitude of the effect of hereditary succession on the dependent variable. Due to data availability, in the 1500-1700 period, the relationships can be estimated every 100 years. Meanwhile, in the 1700-1950 period, I was able to perform estimations every ten years. The figure shows a clear pattern. Before the 18<sup>th</sup> century, the effect of hereditary succession on population density was not significant. Over the following two centuries, nevertheless, the size of the estimates grows systematically and the relationship between historical succession and development becomes economically and statistically significant. Results for historical urbanization rates and historical built-up area in Appendix G show similar patterns.

I posit, precisely, that the effect of hereditary succession on conformity and impersonal prosociality helps explain these patterns. During pre-industrial times, when innovation had not yet assumed the central role, it would later play in society and economic exchange predominantly occurred at a personal level, the benefits of a culture characterized by low

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<sup>15</sup> In Appendix G, I assess the impact of hereditary succession on economic development in ancestral ethnic groups. These cross-sectional estimations use population density and community size as dependent variables. The results are in line with the findings throughout this section: the existence of despotic political institutions is negatively related with development.

<sup>16</sup> In Appendix G, I replicate these estimations adding colonizer fixed effects to rule out the concern that colonization is driving these findings. The observed patterns are similar.



conformity and strong impersonal prosociality remained unrealized. However, as societies left behind their Malthusian character and long-distance trade emerged, the impact of despotic institutions on economic growth and institutional development started to become apparent. Countries with institutional constraints on the ruling elite would then start to diverge from those without them. Considering that most types of innovation imply deviance from group norms, values, and attitudes, it is difficult to think how technological, social, organizational, or intellectual innovations conducive to economic and institutional development would have appeared in places where individuals had strong conformity tendencies. Also, it seems unlikely that the transition towards impersonal markets and the proliferation of voluntary associations (e.g., universities, guilds) would have happened in populations with low trust and fairness towards strangers. In this vein, our results support Mokyr's (2016) idea that these cultural factors have resulted in the European Reversal of the 18<sup>th</sup> century—cultural factors that partially resulted from societies' historical political institutions. If these conjectures are true, conformity and impersonal prosociality should mediate the relationship between hereditary succession and countries' developmental trajectories.

### *VII.B. THE MEDIATING EFFECT OF CONFORMITY AND IMPERSONAL PROSOCIALITY*

In these analyses, I test a comprehensive model of cultural evolution where the effect of hereditary succession on economic development, innovation, democracy, and institutional quality is mediated by the different psychological traits previously used to proxy conformity: restraint, individualism, cultural looseness, embeddedness, intellectual autonomy, and affective autonomy. Economic development, innovation, democracy, and institutional quality are proxied, respectively, through income and income per worker, number of scientific articles and patents per capita, polity II, and the rule of law.

To perform the mediation, I resort to Sabel-Goodman analyses with bootstrapped confidence intervals.<sup>17</sup> All the estimations include ethnographic and contemporaneous controls. Table VIII shows the indirect, direct, and total effects of specifications with cultural restraint, individualism, looseness, embeddedness, intellectual autonomy, and affective autonomy as mediating variables. Table IV shows the indirect, direct, and total effects of specifications with generalized trust, blood donations, parking violations, nepotism, particularism, and fairness as mediating variables.

Taken together, these analyses offer two insights. First, the results show that a history of hereditary succession has a direct negative impact on countries' development trajectory, suggesting a negative persistence effect of despotic political institutions. An increase of 1sd deviation in historical hereditary succession could have reduced current levels of income by up to 1.48%; income by income per worker by up to 1.04%; the number of scientific articles per capita by up to 1.10%; the number of patents per capita by up to 2.44%; the Polity II democracy index by up to 0.60% of a standard deviation; and the rule of law index by up to 0.51% of a standard deviation.

The second key finding is that this negative relationship is mediated by conformity and impersonal prosociality. In some cases, the mediation is complete. Regarding the economic significance of these indirect effects, an increase of 1sd deviation in hereditary succession, through their influence on culture, could have meant a reduction of up to 0.77% in current

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<sup>17</sup> Bootstrapping involved 1,000 replications. The full estimations involved in the mediation—(i) dependent variables regressed on independent variables, (ii) dependent variables regressed on the mediating variables, and (iii) dependent variables regressed on both mediating and independent variables—can be found in Appendix G.

levels of income; 0.35% in income per worker; 1% in the number scientific articles per capita; 1.72% in the number of patents per capita; 0.25% of a standard deviation in the Polity II democracy index; and 0.61% of a standard deviation in the rule of law index.<sup>18</sup> Therefore, the presence of these mediating effects nuances previous findings that link differences in countries' developmental trajectories to the persistence of historical institutional arrangements: there is a need to account for how such historical institutional arrangements have shaped human culture. For instance, as research has linked current levels of democracy to the historical persistence of early democratic institutions in pre-industrial societies (Giuliano & Nunn, 2013; Bentzen et al, 2019), the findings reveal that part of this effect is because historical political systems have shaped human culture in particular ways.

## VIII. CONCLUSION

This paper explores how the lack of institutional constraints to ruling elites has shaped human culture. After leveraging two distinct historical experiences—the existence of hereditary succession in ancestral ethnic groups and populations' exposure to absolutism between 800 and 1800—to perform analyses at the country, city, and individual levels, I show that populations with stronger historical links to despotic institutions today show higher conformity and lower impersonal prosociality. These cultural traits mediate the persistence effect of despotic institutions on countries' developmental trajectories. Hence, understanding current differences in economic development, innovation, democracy, or institutional quality requires building a comprehensive view that takes on not only the potential persistence of historical institutional arrangements, but also how the latter indirectly affect countries' developmental trajectories by shaping human culture.

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<sup>18</sup> One important concern regarding the effect of culture on development is the existence of reverse causality. I address this issue in Appendix G, where income, income per worker, number of scientific articles, patents per capita, the polity II index, and the rule of law index are regressed on the different proxies for conformity and impersonal prosociality, instrumenting the latter through the prevalence of infectious diseases. The results provide support for the idea that culture precedes, at least partially, countries' developmental trajectories. More precisely, the IV estimations provide further evidence that social conformity (impersonal prosociality) has a negative (positive) impact on economic development, democracy, innovation, and institutional quality.

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Table I. THE ORIGINS OF HEREDITARY SUCCESSION

	Dependent variable: Hereditary Succession									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Cereals' Relative Potential Yields	0.230*** (0.0728)		0.386*** (0.0897)	0.270*** (0.0886)					0.413*** (0.0928)	0.285*** (0.0917)
% of Fertile Land		-0.0905 (0.0683)	-0.293*** (0.0847)	-0.233*** (0.0862)					-0.316*** (0.0862)	-0.254*** (0.0878)
Collective-related Motifs					0.0263 (0.0599)		0.0253 (0.0602)	0.0592 (0.0636)	0.0570 (0.0629)	0.0876 (0.0666)
Individual-related Motifs						-0.0141 (0.0693)	-0.0115 (0.0697)	-0.0309 (0.0752)	-0.0146 (0.0721)	-0.0355 (0.0775)
Size Effect: Cereals' Relative Potential Yields	25.83		47.13	30.98					51.08	32.97
Size Effect: Fertile Land		-8.653	-25.41	-20.78					-27.09	-22.45
Size Effect: Individual-related Motifs						-1.399	-1.140	-3.044	-1.450	-3.485
Size Effect: Collective-related Motifs					2.667		2.563	6.099	5.869	9.153
Continental fixed effects	No	No	No	Yes	No	No	No	Yes	No	Yes
R <sup>2</sup>	0.00869	0.00143	0.0191	0.0503	0.000134	0.0000332	0.000156	0.0406	0.0217	0.0545
Mean of dep. var.	0.550	0.559	0.550	0.550	0.559	0.559	0.559	0.559	0.549	0.549
Observations	856	907	856	856	895	895	895	895	845	845

Notes. Robust standard errors in parentheses. Logit models are used. Size Effect represents the probability increase in % associated with a unit increase in the independent variables. These effects are obtained by exponentiating and readjusting the estimated log odds. All independent variables are standardized. The unit of analysis is the ancestral ethnic group. \*p < .10, \*\*p < .05, \*\*\*p < .01.

TABLE II. HEREDITARY SUCCESSION AND SOCIAL STRUCTURE IN ANCESTRAL ETHNIC GROUPS

Panel A: Dependent variable: Stratification			
	(1)	(2)	(3)
Hereditary Succession	0.499*** (0.154)	0.880*** (0.209)	0.935*** (0.212)
Size Effect	64.73	141.0	154.7
Ethnographic controls	No	Yes	Yes
Continental fixed effects	No	No	Yes
R <sup>2</sup>	0.0104	0.328	0.337
Mean of dep. var.	0.308	0.305	0.305
Observations	835	797	797
Panel B: Dependent variable: Slavery			
	(1)	(2)	(3)
Hereditary Succession	0.697*** (0.141)	0.652*** (0.154)	0.573*** (0.181)
Size Effect	100.9	91.98	77.36
Ethnographic controls	No	Yes	Yes
Continental fixed effects	No	No	Yes
R <sup>2</sup>	0.0214	0.0990	0.284
Mean of dep. var.	0.508	0.499	0.499
Observations	841	797	797
Panel C: Dependent variable: Social Rigidity			
	(1)	(2)	(3)
Hereditary Succession	2.436** (1.193)	3.483*** (1.120)	3.483*** (1.120)
Size Effect	1042.9	3156.3	3156.3
Ethnographic controls	No	Yes	Yes
Continental fixed effects	No	No	Yes
R <sup>2</sup>	0.182	0.473	0.473
Mean of dep. var.	0.346	0.346	0.346
Observations	26	26	26
Panel D: Dependent variable: Strong Social Conformity			
	(1)	(2)	(3)
Hereditary Succession	1.160** (0.475)	1.268** (0.514)	1.240** (0.527)
Size Effect	218.9	255.4	245.7
Ethnographic controls	No	Yes	Yes
Continental fixed effects	No	No	Yes
R <sup>2</sup>	0.0582	0.0779	0.0980
Mean of dep. var.	0.500	0.500	0.487
Observations	78	78	76

Notes. Robust standard errors in parentheses. Logit models are used. Size Effect represents the probability increase in % associated with a unit increase in the independent variables. These effects are obtained by exponentiating and readjusting the estimated log odds. Ethnographic controls include political jurisdictions at the local and above the local levels, as well as the intensity of folklore related to the collective and societies' dependence on agriculture. The unit of analysis is the ancestral ethnic group. \*p < .10, \*\*p < .05, \*\*\*p < .01.

TABLE III. THE PRODUCTION AND CONSUMPTION OF BOOKS UNDER ABSOLUTIST RULE IN EARLY MODERN EUROPE

Panel A: Dependent variable: Production of Printed Books					
	(1)	(2)	(3)	(4)	(5)
Exposure to Absolutism	-0.573*** (0.164)	-0.456*** (0.107)	-0.414*** (0.0943)	-0.566** (0.267)	-0.444*** (0.109)
Literacy Rates		0.275*** (0.0348)	0.271*** (0.0310)		0.282*** (0.0427)
Population Density			0.189 (0.148)		0.217 (0.229)
Contemporaneous controls	No	No	No	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.48	0.80	0.80	0.50	0.80
Mean of dep. var.	3.673	3.665	3.665	3.673	3.665
Observations	46	40	40	46	40

Panel B: Dependent variable: Annual per Capita Consumption of Books					
	(1)	(2)	(3)	(4)	(5)
Exposure to Absolutism	-0.382** (0.156)	-0.388*** (0.112)	-0.361*** (0.111)	-0.637** (0.264)	-0.349** (0.142)
Literacy Rates		0.271*** (0.0282)	0.268*** (0.0280)		0.270*** (0.0402)
Population Density			0.119 (0.139)		0.172 (0.158)
Contemporaneous controls	No	No	No	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.51	0.86	0.86	0.61	0.87
Mean of dep. var.	-3.084	-3.086	-3.086	-3.084	-3.086
Observations	43	39	39	43	39

Notes. Contemporaneous controls include the proportion of people living in cities that host a university, the proportion of people living in cities that are the seat of a bishop, and the proportion of people living in cities that are the seat of an archbishop. Dependent variables are log-transformed. The independent variable is standardized. The unit of analysis is the country. \*p < .10, \*\*p < .05, \*\*\*p < .01.



TABLE IV. THE EFFECT OF HEREDITARY SUCCESSION ON CONFORMITY AND IMPERSONAL PROSOCIALITY

Panel A: Dependent variables: Restraint, Individualism, and Cultural Looseness									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Restraint	Restraint	Restraint	Individualism	Individualism	Individualism	Cultural Looseness	Cultural Looseness	Cultural Looseness
Hereditary Succession	0.336 <sup>*</sup> (0.182)	0.437 <sup>**</sup> (0.174)	0.391 <sup>**</sup> (0.177)	-0.514 <sup>***</sup> (0.133)	-0.428 <sup>***</sup> (0.137)	-0.346 <sup>***</sup> (0.124)	-0.495 <sup>**</sup> (0.195)	-0.606 <sup>***</sup> (0.198)	-0.119 (0.168)
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Continental fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
R <sup>2</sup>	0.207	0.363	0.500	0.275	0.503	0.584	0.502	0.535	0.712
Mean of dep. var.	-0.0174	-0.0473	-0.0473	-0.0900	-0.0786	-0.0786	0.0134	0.0211	0.0211
Observations	80	75	75	84	83	83	54	53	53

Panel B: Dependent variables: Embeddedness, Intellectual Autonomy, and Affective Autonomy									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Embeddedness	Embeddedness	Embeddedness	Intellectual Autonomy	Intellectual Autonomy	Intellectual Autonomy	Affective Autonomy	Affective Autonomy	Affective Autonomy
Hereditary Succession	0.900 <sup>***</sup> (0.151)	0.691 <sup>***</sup> (0.185)	0.422 <sup>**</sup> (0.206)	-0.879 <sup>***</sup> (0.138)	-0.688 <sup>***</sup> (0.160)	-0.425 <sup>***</sup> (0.152)	-0.780 <sup>***</sup> (0.204)	-0.615 <sup>***</sup> (0.228)	-0.404 (0.258)
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Continental fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
R <sup>2</sup>	0.499	0.599	0.690	0.471	0.536	0.658	0.367	0.467	0.591
Mean of dep. var.	0.0220	0.0330	0.0330	-0.0233	-0.0543	-0.0543	0.00320	-0.00145	-0.00145
Observations	67	64	64	67	64	64	67	64	64

Panel C: Dependent variables: Trust, Fairness, and Blood Donations to Non-Family									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Trust	Trust	Trust	Fairness	Fairness	Fairness	Blood Donations to Non-Family	Blood Donations to Non-Family	Blood Donations to Non-Family
Hereditary Succession	-0.561 <sup>***</sup> (0.155)	-0.431 <sup>***</sup> (0.158)	-0.310 <sup>*</sup> (0.161)	-0.340 (0.239)	-0.208 (0.278)	-0.371 (0.259)	-0.481 <sup>***</sup> (0.105)	-0.472 <sup>***</sup> (0.115)	-0.269 <sup>**</sup> (0.105)
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Continental fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
R <sup>2</sup>	0.206	0.289	0.431	0.109	0.266	0.343	0.236	0.387	0.563
Mean of dep. var.	-0.120	-0.109	-0.109	-0.0831	-0.0776	-0.0776	-0.0258	0.0134	0.0134
Observations	89	85	85	79	75	75	143	126	126

Panel D: Dependent variables: Parking Ticket Violations, Nepotism, and Particularism									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Parking Ticket	Parking Ticket	Parking Ticket	Nepotism	Nepotism	Nepotism	Particularism	Particularism	Particularism

	Violations	Violations	Violations						
Hereditary Succession	0.357*** (0.130)	0.307** (0.127)	0.206 (0.139)	0.430** (0.174)	0.427** (0.176)	0.315* (0.179)	0.766 (0.533)	1.249*** (0.368)	1.112** (0.476)
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Continental fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
R <sup>2</sup>	0.141	0.237	0.309	0.0991	0.187	0.272	0.250	0.523	0.593
Mean of dep. var.	0.0271	0.0315	0.0315	0.0672	0.0619	0.0619	0.0625	0.0882	0.0882
Observations	132	129	129	100	97	97	38	37	37

Notes. Robust standard errors in parentheses. Ethnographic controls include political jurisdictions at the local and above the local levels, as well as the intensity of folklore related to the collective and societies' dependence on agriculture. Contemporaneous controls include ethnic fractionalization, linguistic fractionalization, and genetic diversity. The unit of analysis is the country. All variables are standardized. \*p < .10, \*\*p < .05, \*\*\*p < .01.

TABLE V. THE EFFECT OF EXPOSURE TO ABSOLUTISM ON CONFORMITY AND IMPERSONAL PROSOCIALITY

Panel A: Dependent variables: Restraint, Individualism, and Cultural Looseness									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Restraint	Restraint	Restraint	Individualism	Individualism	Individualism	Cultural Looseness	Cultural Looseness	Cultural Looseness
Years of Exposure to Absolutism	0.444*** (0.128)	0.258 (0.160)	0.227 (0.166)	-0.267* (0.138)	-0.254** (0.119)	-0.226* (0.124)	-0.519*** (0.141)	-0.496*** (0.149)	-0.539*** (0.146)
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Continental fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
R <sup>2</sup>	0.533	0.636	0.721	0.501	0.547	0.572	0.843	0.877	0.920
Mean of dep. var.	0.0496	0.0130	0.0130	0.680	0.680	0.680	0.270	0.295	0.295
Observations	32	31	31	32	32	32	28	27	27
Panel B: Dependent variables: Embeddedness, Intellectual Autonomy, and Affective Autonomy									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Embeddedness	Embeddedness	Embeddedness	Intellectual Autonomy	Intellectual Autonomy	Intellectual Autonomy	Affective Autonomy	Affective Autonomy	Affective Autonomy
Years of Exposure to Absolutism	0.546*** (0.101)	0.702*** (0.175)	0.440*** (0.135)	-0.466*** (0.0801)	-0.618*** (0.149)	-0.509*** (0.147)	-0.560*** (0.0882)	-0.739*** (0.156)	-0.564*** (0.171)
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Continental fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
R <sup>2</sup>	0.740	0.805	0.902	0.812	0.833	0.853	0.761	0.854	0.901
Mean of dep. var.	-0.568	-0.586	-0.586	0.645	0.641	0.641	0.455	0.470	0.470
Observations	28	27	27	28	27	27	28	27	27
Panel C: Dependent variables: Trust, Fairness, and Blood Donations to Non-Family									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Trust	Trust	Trust	Fairness	Fairness	Fairness	Blood Donations to Non-Family	Blood Donations to Non-Family	Blood Donations to Non-Family
Years of Exposure to Absolutism	-0.385*** (0.133)	-0.380*** (0.131)	-0.341** (0.131)	-0.481*** (0.0748)	-0.580*** (0.110)	-0.638*** (0.110)	-0.313* (0.182)	-0.207 (0.270)	-0.0947 (0.264)
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Continental fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
R <sup>2</sup>	0.783	0.801	0.822	0.792	0.826	0.848	0.620	0.633	0.664
Mean of dep. var.	0.332	0.362	0.362	-0.0892	-0.0616	-0.0616	0.990	1.005	1.005
Observations	37	36	36	35	34	34	35	34	34
Panel D: Dependent variables: Parking Ticket Violations, Nepotism, and Particularism									

	(1) Parking Violations	(2) Parking Violations	(3) Parking Violations	(4) Nepotism	(5) Nepotism	(6) Nepotism	(7) Particularism	(8) Particularism	(9) Particularism
Years of Exposure to Absolutism	0.262 (0.171)	0.222 (0.218)	0.140 (0.241)	0.510*** (0.125)	0.547** (0.194)	0.608** (0.226)	0.181 (0.106)	0.340** (0.145)	0.340** (0.145)
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Continental fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
R <sup>2</sup>	0.290	0.365	0.453	0.728	0.734	0.770	0.779	0.845	0.845
Mean of dep. var.	-0.275	-0.272	-0.272	-0.487	-0.510	-0.510	-0.549	-0.532	-0.532
Observations	36	35	35	32	31	31	21	20	20

Notes. Robust standard errors in parentheses. Ethnographic controls include political jurisdictions at the local and above the local levels, as well as the intensity of folklore related to the collective and societies' dependence on agriculture. City controls include historical exposure to university, bishops, and archbishops. Contemporaneous controls include ethnic fractionalization, linguistic fractionalization, and genetic diversity. The unit of analysis is the country. All variables are standardized. \*p < .10, \*\*p < .05, \*\*\*p < .01.

TABLE VI. THE EFFECT OF EXPOSURE TO ABSOLUTISM ON CULTURE ACROSS ITALIAN CITIES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Banks Loan Per Capita		Bank Deposits Per Capita		N. Nonprofit Organizations Per Capita		Organ Donation Organization	
Exposure to Absolutism	-0.203*** (0.0661)	-0.245** (0.0872)	-0.140*** (0.0447)	-0.199** (0.0808)	-0.651*** (0.133)	-0.614*** (0.163)	-0.416*** (0.0794)	-0.461*** (0.136)
City controls	No	Yes	No	Yes	No	Yes	No	Yes
Regional fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.344	0.417	0.398	0.501	0.470	0.497	0.303	0.328
Mean of dep. var.	0.0448	0.0448	0.0624	0.0624	0.0468	0.0468	0.0428	0.0428
Observations	133	133	133	133	133	133	133	133

Notes. Standard errors clustered at the NUTS-2 level in parentheses. City controls include historical exposure to university, bishops, and archbishops. The unit of analysis is the city. All variables are standardized. \*p < .10, \*\*p < .05, \*\*\*p < .01.

TABLE VI. THE EFFECT OF HEREDITARY SUCCESSION ON CONFORMITY AND IMPERSONAL PROSOCIALITY: INDIVIDUAL-LEVEL ANALYSES

Panel A: Autonomy				
	(1)	(2)	(3)	(4)
Hereditary Succession	-0.164*** (0.00161)	-0.111*** (0.00203)	-0.113*** (0.00209)	-0.0909*** (0.00222)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.0316	0.0857	0.104	0.125
Mean of dep. var.	-0.0128	-0.0228	-0.0232	-0.0232
Observations	378042	365792	329542	329542
Panel B: Importance of Behaving Properly				
	(1)	(2)	(3)	(4)
Hereditary Succession	0.153*** (0.00240)	0.0693*** (0.00351)	0.0718*** (0.00360)	0.0585*** (0.00405)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.0268	0.0531	0.0543	0.0663
Mean of dep. var.	0.0130	0.0145	0.0232	0.0232
Observations	141247	134754	127061	127061
Panel C: Importance of Tradition				
	(1)	(2)	(3)	(4)
Hereditary Succession	0.123*** (0.00247)	0.00447 (0.00356)	0.0129*** (0.00361)	0.00348 (0.00394)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.0172	0.0614	0.0738	0.0914
Mean of dep. var.	0.00600	0.00717	0.0188	0.0188
Observations	141619	135089	127349	127349
Panel D: Obedience				
	(1)	(2)	(3)	(4)
Hereditary Succession	0.139*** (0.00165)	0.124*** (0.00208)	0.124*** (0.00216)	0.126*** (0.00233)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.0309	0.0523	0.0591	0.0709
Mean of dep. var.	0.00271	0.0165	0.0205	0.0205
Observations	387323	375073	338342	338342
Panel E: Fairness				
	(1)	(2)	(3)	(4)
Hereditary Succession	-0.0130***	-0.00572	0.000286	-0.0393***

	(0.00266)	(0.00365)	(0.00372)	(0.00425)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.000192	0.0130	0.0246	0.0336
Mean of dep. var.	-0.00804	-0.00891	-0.0107	-0.0107
Observations	142080	135555	127608	127608

Panel F: Generalized Trust				
	(1)	(2)	(3)	(4)
Hereditary Succession	-0.0652*** (0.00156)	-0.0704*** (0.00207)	-0.0648*** (0.00212)	-0.0388*** (0.00227)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.00993	0.0287	0.0404	0.0572
Mean of dep. var.	-0.0273	-0.0248	-0.0258	-0.0258
Observations	373137	361131	326935	326935

Panel G: In vs. Out Trust				
	(1)	(2)	(3)	(4)
Hereditary Succession	0.0375*** (0.00231)	0.0720*** (0.00300)	0.0657*** (0.00305)	0.0117*** (0.00331)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.00578	0.0516	0.0560	0.0799
Mean of dep. var.	0.0140	0.0171	0.0211	0.0211
Observations	197684	188223	179984	179984

Notes. Robust standard errors in parentheses. Ethnographic controls include political jurisdictions at the local and above the local levels, as well as the intensity of folklore related to the collective and societies' dependence on agriculture. Contemporaneous controls include ethnic fractionalization, linguistic fractionalization, and genetic diversity. Individual controls include age, sex, and income. The unit of analysis is the individual. All variables are standardized. \*p < .10, \*\*p < .05, \*\*\*p < .01.

TABLE VII. THE EFFECT OF EXPOSURE TO ABSOLUTISM ON CONFORMITY AND IMPERSONAL PROSOCIALITY: INDIVIDUAL-LEVEL ANALYSES

Panel B: Autonomy				
	(1)	(2)	(3)	(4)
Years of Exposure to Absolutism	-0.327***	-0.254***	-0.265***	-0.246***
	(0.00324)	(0.00458)	(0.00491)	(0.00569)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
City controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.114	0.219	0.248	0.253
Mean of dep. var.	-0.0159	-0.0172	-0.0310	-0.0310
Observations	97144	91369	81582	81582
Panel C: Importance of Behaving Properly				
	(1)	(2)	(3)	(4)
Years of Exposure to Absolutism	0.222***	0.0996***	0.106***	0.0199**
	(0.00436)	(0.00708)	(0.00749)	(0.00907)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
City controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.0605	0.121	0.126	0.132
Mean of dep. var.	-0.0338	-0.0447	-0.0313	-0.0313
Observations	43042	39965	37690	37690
Panel D: Importance of Tradition				
	(1)	(2)	(3)	(4)
Years of Exposure to Absolutism	0.377***	0.333***	0.362***	0.320***
	(0.00426)	(0.00677)	(0.00704)	(0.00868)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
City controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.175	0.221	0.244	0.245
Mean of dep. var.	0.0559	0.0425	0.0615	0.0615
Observations	43293	40191	37906	37906
Panel E: Obedience				
	(1)	(2)	(3)	(4)
Years of Exposure to Absolutism	0.160***	0.158***	0.150***	0.144***
	(0.00300)	(0.00450)	(0.00489)	(0.00548)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
City controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes



R <sup>2</sup>	0.0437	0.0820	0.0921	0.0944
Mean of dep. var.	-0.0288	0.0000612	0.00806	0.00806
Observations	102192	96417	86209	86209

Panel F: Fairness				
	(1)	(2)	(3)	(4)
Years of Exposure to Absolutism	-0.168***	-0.148***	-0.137***	-0.163***
	(0.00359)	(0.00623)	(0.00656)	(0.00766)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
City controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.0370	0.0846	0.100	0.102
Mean of dep. var.	-0.0574	-0.0399	-0.0480	-0.0480
Observations	43929	40824	38255	38255

Panel G: Generalized Trust				
	(1)	(2)	(3)	(4)
Years of Exposure to Absolutism	-0.224***	-0.160***	-0.155***	-0.129***
	(0.00360)	(0.00515)	(0.00558)	(0.00608)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
City controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.0605	0.118	0.130	0.132
Mean of dep. var.	0.0588	0.0779	0.0705	0.0705
Observations	100793	95195	84598	84598

Panel H: In vs. Out Trust				
	(1)	(2)	(3)	(4)
Years of Exposure to Absolutism	0.261***	0.150***	0.140***	0.0729***
	(0.00390)	(0.00605)	(0.00639)	(0.00786)
Ethnographic controls	No	Yes	Yes	Yes
Contemporaneous controls	No	Yes	Yes	Yes
City controls	No	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes
Continental fixed effects	No	No	No	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.0850	0.159	0.162	0.165
Mean of dep. var.	0.0791	0.0700	0.0769	0.0769
Observations	52415	48477	45957	45957

Notes. Robust standard errors in parentheses. Ethnographic controls include political jurisdictions at the local and above the local levels, as well as the intensity of folklore related to the collective and societies' dependence on agriculture. City controls include historical exposure to university, bishops, and archbishops. Contemporaneous controls include ethnic fractionalization, linguistic fractionalization, and genetic diversity. Individual controls include age, sex, and income. The unit of analysis is the individual. All variables are standardized. \*p < .10, \*\*p < .05, \*\*\*p < .01.

TABLE VIII. HISTORICAL HEREDITARY SUCCESSION, SOCIAL CONFORMITY, AND COUNTRIES' DEVELOPMENT TRAJECTORIES

	(1)	(2)	(3)	(4)	(5)	(6)
	Income	Income per Worker	Scientific Articles Per Capita	Patents Per Capita	Polity II	Rule of Law
Panel A: Restraint						
Indirect Effect	-0.27 [-0.55, -0.06]	-0.13 [-0.30, -0.02]	-0.21 [-0.56, 0.03]	-0.30 [-1.19, 0.11]	-0.15 [-0.31, -0.02]	-0.16 [-0.32, -0.02]
Direct Effect	-0.81 [-1.35, -0.28]	-0.51 [-0.91, -0.16]	-1.10 [-1.89, -0.32]	-2.44 [-4.36, -0.71]	-0.22 [-0.62, 0.13]	-0.42 [-0.83, -0.01]
Total Effect	-1.08 [-1.59, -0.53]	-0.64 [-1.04, -0.30]	-1.31 [-2.00, -0.54]	-2.74 [-4.64, -1.15]	-0.36 [-0.75, -0.02]	-0.57 [-0.96, -0.16]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	74.00	73.00	69.00	55.00	72.00	75.00
Panel B: Individualism						
Indirect Effect	-0.31 [-0.71, -0.06]	-0.14 [-0.33, -0.02]	-0.51 [-1.19, -0.07]	-0.70 [-2.10, -0.04]	-0.06 [-0.18, 0.03]	-0.25 [-0.58, -0.07]
Direct Effect	-0.75 [-1.59, -0.20]	-0.42 [-0.94, -0.03]	-0.81 [-1.68, 0.14]	-2.07 [-3.85, -0.11]	-0.04 [-0.80, 0.32]	-0.36 [-0.92, 0.03]
Total Effect	-1.06 [-1.94, -0.53]	-0.56 [-1.11, -0.22]	-1.32 [-2.36, -0.25]	-2.77 [-4.85, -0.91]	-0.10 [-0.82, 0.25]	-0.61 [-1.25, -0.24]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	57.00	56.00	55.00	51.00	56.00	57.00
Panel C: Cultural Looseness						
Indirect Effect	-0.51 [-1.19, -0.14]	-0.33 [-0.76, -0.07]	-0.55 [-1.15, -0.09]	-0.62 [-2.12, 0.30]	-0.23 [-0.47, -0.05]	-0.35 [-0.75, -0.11]
Direct Effect	-0.73 [-1.32, -0.11]	-0.35 [-0.73, 0.09]	-1.05 [-2.22, -0.11]	-1.86 [-4.37, -0.08]	-0.11 [-0.69, 0.26]	-0.37 [-0.80, -0.01]
Total Effect	-1.24 [-2.04, -0.66]	-0.68 [-1.13, -0.24]	-1.60 [-2.74, -0.65]	-2.48 [-5.10, -0.93]	-0.34 [-0.93, 0.06]	-0.72 [-1.28, -0.35]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes

Observations	53.00	51.00	48.00	42.00	50.00	53.00
Panel D: Embeddedness						
Indirect Effect	-0.66 [-1.19, -0.25]	-0.35 [-0.63, -0.10]	-0.87 [-1.72, -0.29]	-1.72 [-3.63, -0.53]	-0.25 [-0.43, -0.08]	-0.51 [-0.96, -0.22]
Direct Effect	0.01 [-0.82, 0.68]	0.09 [-0.45, 0.57]	0.19 [-0.77, 1.06]	-0.92 [-3.16, 1.27]	-0.32 [-0.70, 0.09]	0.13 [-0.37, 0.61]
Total Effect	-0.64 [-1.40, 0.01]	-0.25 [-0.77, 0.16]	-0.68 [-1.96, 0.41]	-2.64 [-5.16, -0.79]	-0.57 [-0.95, -0.13]	-0.38 [-0.94, 0.03]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	64.00	63.00	59.00	50.00	63.00	64.00
Panel E: Intellectual Autonomy						
Indirect Effect	-0.64 [-1.11, -0.26]	-0.35 [-0.60, -0.16]	-0.98 [-1.68, -0.43]	-1.59 [-3.06, -0.61]	-0.23 [-0.43, -0.09]	-0.50 [-0.84, -0.25]
Direct Effect	0.00 [-0.81, 0.65]	0.09 [-0.37, 0.46]	0.30 [-0.75, 1.15]	-1.05 [-3.30, 0.83]	-0.33 [-0.74, 0.05]	0.11 [-0.33, 0.44]
Total Effect	-0.64 [-1.47, 0.05]	-0.25 [-0.75, 0.13]	-0.68 [-1.90, 0.36]	-2.64 [-5.04, -0.58]	-0.57 [-0.96, -0.17]	-0.38 [-0.91, 0.02]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	64.00	63.00	59.00	50.00	63.00	64.00
Panel F: Affective Autonomy						
Indirect Effect	-0.43 [-1.01, -0.11]	-0.25 [-0.64, -0.06]	-0.65 [-1.73, -0.12]	-1.55 [-3.26, -0.41]	-0.19 [-0.42, -0.04]	-0.32 [-0.79, -0.10]
Direct Effect	-0.22 [-1.01, 0.69]	-0.00 [-0.51, 0.52]	-0.02 [-1.11, 1.08]	-1.09 [-3.30, 0.84]	-0.38 [-0.79, 0.13]	-0.06 [-0.56, 0.47]
Total Effect	-0.64 [-1.42, 0.01]	-0.25 [-0.74, 0.15]	-0.68 [-1.84, 0.26]	-2.64 [-5.26, -0.75]	-0.57 [-0.96, -0.12]	-0.38 [-0.91, 0.04]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	64.00	63.00	59.00	50.00	63.00	64.00

Notes. Bootstrapped confidence intervals in brackets (1000 replications). Ethnographic controls include political jurisdictions at the local and above the local levels, as well as the intensity of folklore related to the collective and dependence on agriculture. Contemporaneous controls include ethnic and linguistic fractionalization, as well as genetic diversity. The independent and mediating variables are standardized in all panels. In Panel A, the mediating variable is restraint. In Panel B, the mediating variable is individualism. In Panel C, the mediating variable is cultural looseness. In Panel D, the mediating variable is embeddedness. In Panel E, the mediating variable is intellectual autonomy. In Panel F, the mediating variable is affective autonomy. The dependent variable in Column (1) is the logarithmic transformation of countries' income in 2000. In Column (2), the dependent variable is the logarithmic transformation of income per

worker in 2000 (at purchasing power parity). In Column (3), the dependent variable is the logarithmic transformation of the number of scientific articles per capita. In Column (4), the dependent variable is the logarithmic transformation of the number of patents per capita. In Column (5), the dependent variable is the standardized variable of the Polity II index. In Column (6), the dependent variable is the rule of law index. The unit of analysis is the country. \*p < .10, \*\*p < .05, \*\*\*p < .01.

TABLE VIII. HISTORICAL HEREDITARY SUCCESSION, IMPERSONAL PROSOCIALITY, AND COUNTRIES' DEVELOPMENT TRAJECTORIES

	(1)	(2)	(3)	(4)	(5)	(6)
	Income	Income per Worker	Scientific Articles Per Capita	Patents Per Capita	Polity II	Rule of Law
Panel A: Trust						
Indirect Effect	-0.20 [-0.49, -0.03]	-0.10 [-0.25, -0.01]	-0.39 [-0.83, -0.06]	-0.51 [-1.30, 0.12]	-0.05 [-0.19, 0.06]	-0.19 [-0.41, -0.02]
Direct Effect	-0.63 [-1.18, -0.11]	-0.38 [-0.75, -0.02]	-0.71 [-1.40, 0.00]	-1.93 [-3.40, -0.71]	-0.37 [-0.73, -0.01]	-0.30 [-0.62, 0.02]
Total Effect	-0.83 [-1.38, -0.24]	-0.48 [-0.84, -0.11]	-1.11 [-1.78, -0.42]	-2.44 [-3.92, -1.04]	-0.42 [-0.76, -0.08]	-0.48 [-0.84, -0.12]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	84.00	83.00	78.00	60.00	81.00	85.00
Panel B: Fairness						
Indirect Effect	-0.02 [-0.31, 0.08]	-0.00 [-0.16, 0.06]	-0.05 [-0.54, 0.08]	-0.34 [-1.30, 0.24]	0.02 [-0.07, 0.15]	-0.02 [-0.19, 0.04]
Direct Effect	-0.90 [-1.54, -0.19]	-0.53 [-0.97, -0.11]	-1.10 [-1.93, -0.21]	-2.32 [-4.21, -0.92]	-0.60 [-0.93, -0.23]	-0.51 [-0.90, -0.08]
Total Effect	-0.92 [-1.56, -0.25]	-0.53 [-0.96, -0.16]	-1.15 [-1.97, -0.40]	-2.66 [-4.59, -1.14]	-0.57 [-0.92, -0.21]	-0.53 [-0.94, -0.11]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	74.00	74.00	71.00	54.00	72.00	75.00
Panel C: Blood Donation to Non-Family						
Indirect Effect	-0.53 [-0.82, -0.26]	-0.29 [-0.48, -0.11]	-0.79 [-1.25, -0.40]	-1.20 [-2.24, -0.34]	-0.21 [-0.36, -0.09]	-0.32 [-0.49, -0.14]
Direct Effect	-0.21 [-0.50, 0.06]	0.01 [-0.24, 0.25]	-0.26 [-0.71, 0.28]	-1.08 [-2.42, 0.21]	0.12 [-0.20, 0.43]	0.01 [-0.18, 0.19]
Total Effect	-0.75 [-1.13, -0.39]	-0.28 [-0.56, 0.00]	-1.05 [-1.60, -0.37]	-2.28 [-3.95, -0.84]	-0.10 [-0.40, 0.23]	-0.31 [-0.57, -0.02]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes

Observations	120.00	119.00	110.00	59.00	122.00	126.00
Panel D: Parking Ticket Violations						
Indirect Effect	-0.14 [-0.33, -0.02]	-0.08 [-0.21, -0.01]	-0.23 [-0.60, -0.05]	-0.39 [-1.06, 0.03]	-0.02 [-0.09, 0.03]	-0.09 [-0.21, -0.02]
Direct Effect	-0.45 [-0.75, -0.12]	-0.14 [-0.37, 0.12]	-0.69 [-1.13, -0.16]	-1.89 [-2.99, -0.89]	-0.16 [-0.46, 0.13]	-0.27 [-0.47, -0.05]
Total Effect	-0.59 [-0.93, -0.25]	-0.22 [-0.48, 0.03]	-0.92 [-1.47, -0.37]	-2.28 [-3.50, -1.18]	-0.18 [-0.46, 0.10]	-0.36 [-0.59, -0.13]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	129.00	126.00	114.00	63.00	127.00	129.00
Panel E: Nepotism						
Indirect Effect	-0.35 [-0.65, -0.03]	-0.20 [-0.41, -0.00]	-0.61 [-1.15, -0.09]	-0.83 [-1.87, 0.26]	-0.11 [-0.24, -0.01]	-0.27 [-0.53, -0.03]
Direct Effect	-0.47 [-0.88, -0.13]	-0.30 [-0.57, -0.05]	-0.48 [-1.01, 0.05]	-1.38 [-2.84, -0.38]	-0.00 [-0.34, 0.30]	-0.16 [-0.42, 0.08]
Total Effect	-0.82 [-1.28, -0.41]	-0.50 [-0.77, -0.22]	-1.09 [-1.72, -0.46]	-2.21 [-3.64, -1.00]	-0.11 [-0.43, 0.19]	-0.43 [-0.74, -0.14]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	97.00	96.00	89.00	61.00	95.00	97.00
Panel F: Particularism						
Indirect Effect	-0.77 [-3.45, -0.01]	-0.29 [-1.72, 0.16]	-1.15 [-5.68, 0.12]	-1.37 [-7.79, 0.38]	-0.21 [-1.48, 0.14]	-0.61 [-3.00, -0.00]
Direct Effect	-1.48 [-5.29, -0.08]	-1.04 [-2.73, 0.14]	-0.87 [-7.03, 1.83]	-2.75 [-12.83, 1.49]	0.31 [-0.76, 3.23]	-0.68 [-3.57, 0.43]
Total Effect	-2.25 [-7.00, -1.12]	-1.33 [-3.12, -0.66]	-2.02 [-9.44, -0.58]	-4.12 [-15.71, -1.35]	0.10 [-0.94, 2.14]	-1.29 [-4.62, -0.57]
Ethnographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporaneous controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	36.00	36.00	36.00	34.00	37.00	37.00

Notes. Bootstrapped confidence intervals in brackets (1000 replications). Ethnographic controls include political jurisdictions at the local and above the local levels, as well as the intensity of folklore related to the collective and dependence on agriculture. Contemporaneous controls include ethnic and linguistic fractionalization, as well as genetic diversity. The independent and mediating variables are standardized in all panels. In Panel A, the mediating variable is trust. In Panel B, the mediating variable is fairness. In Panel C, the mediating variable is blood donation to non-family. In Panel D, the mediating variable is parking ticket violations. In Panel E, the mediating variable is nepotism. In Panel F, the mediating variable is particularism. The dependent variable in Column (1) is the logarithmic transformation of countries' income in 2000. In Column (2), the dependent variable is the logarithmic transformation of income

per worker in 2000 (at purchasing power parity). In Column (3), the dependent variable is the logarithmic transformation of the number of scientific articles per capita. In Column (4), the dependent variable is the logarithmic transformation of the number of patents per capita. In Column (5), the dependent variable is the standardized variable of the Polity II index. In Column (6), the dependent variable is the rule of law index. The unit of analysis is the country. \*p < .10, \*\*p < .05, \*\*\*p < .01.ϕ

FIGURE I: HISTORICAL HEREDITARY SUCCESSION ACROSS MODERN COUNTRIES

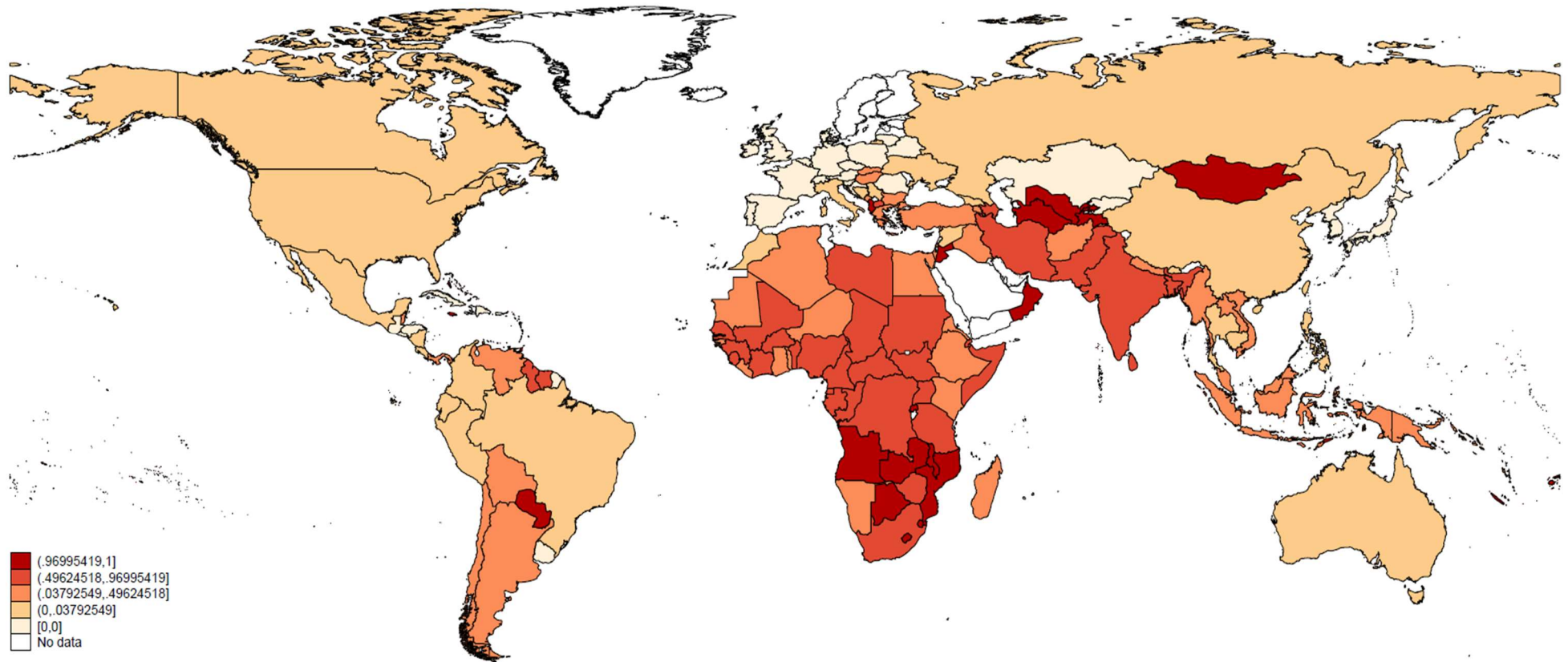




FIGURE II: EXPOSURE TO ABSOLUTISM ACROSS MODERN COUNTRIES IN EUROPE, NORTH AFRICA, AND SOUTHWEST ASIA

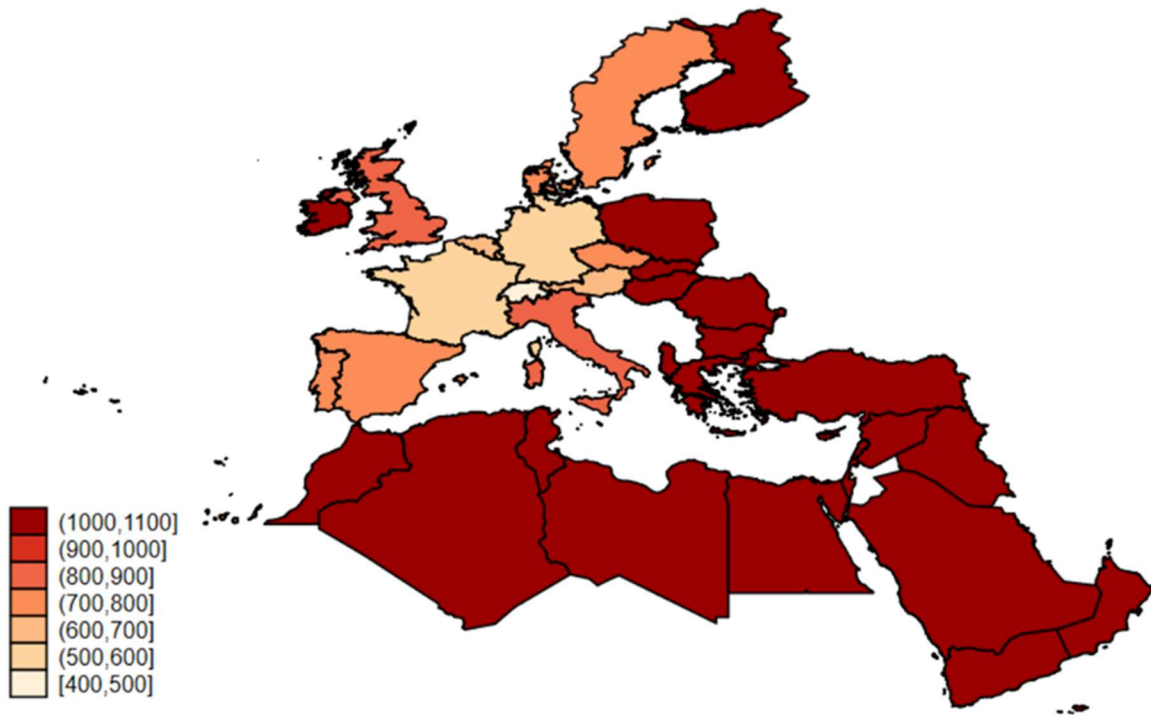


FIGURE III: DIFFERENCES IN THE SOCIAL STRUCTURE OF ETHNIC GROUPS WITH HEREDITARY POLITICAL SUCCESSION

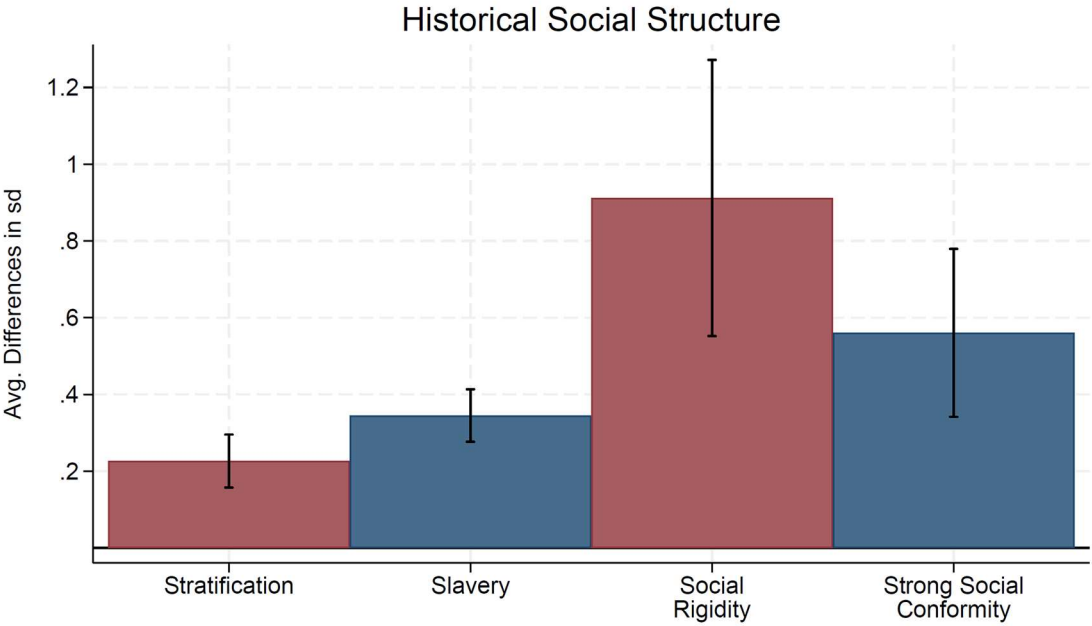


FIGURE IV. CULTURAL DIFFERENCES BETWEEN STRONGLY AND WEAKLY DESPOTIC SOCIETIES:  
HEREDITARY SUCCESSION

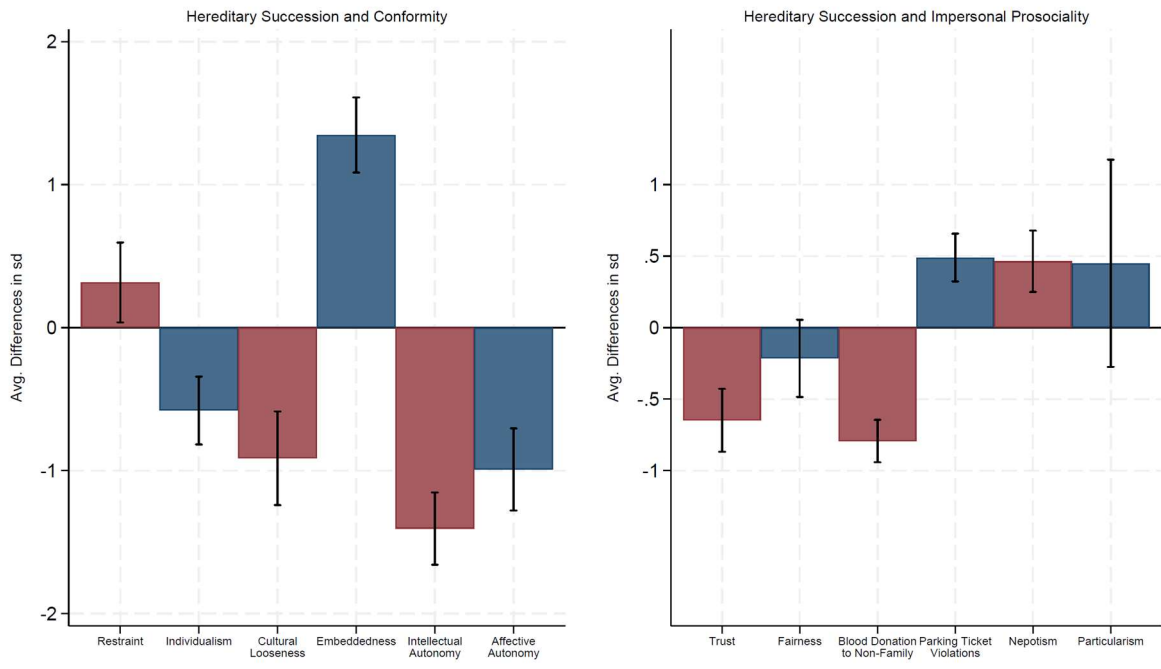


FIGURE V. CULTURAL DIFFERENCES BETWEEN STRONGLY AND WEAKLY DESPOTIC SOCIETIES:  
EXPOSURE TO ABSOLUTISM

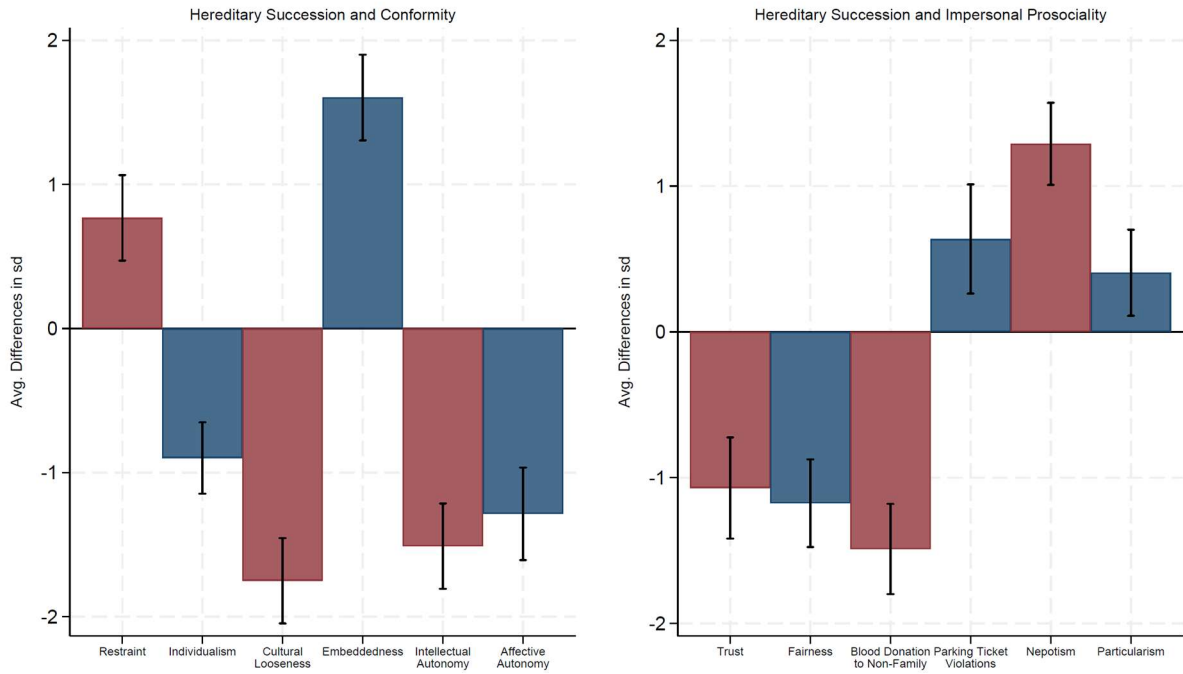


FIGURE VI. DESPOTIC POLITICAL INSTITUTIONS AND PREFERENCES FOR SOCIAL CONFORMITY

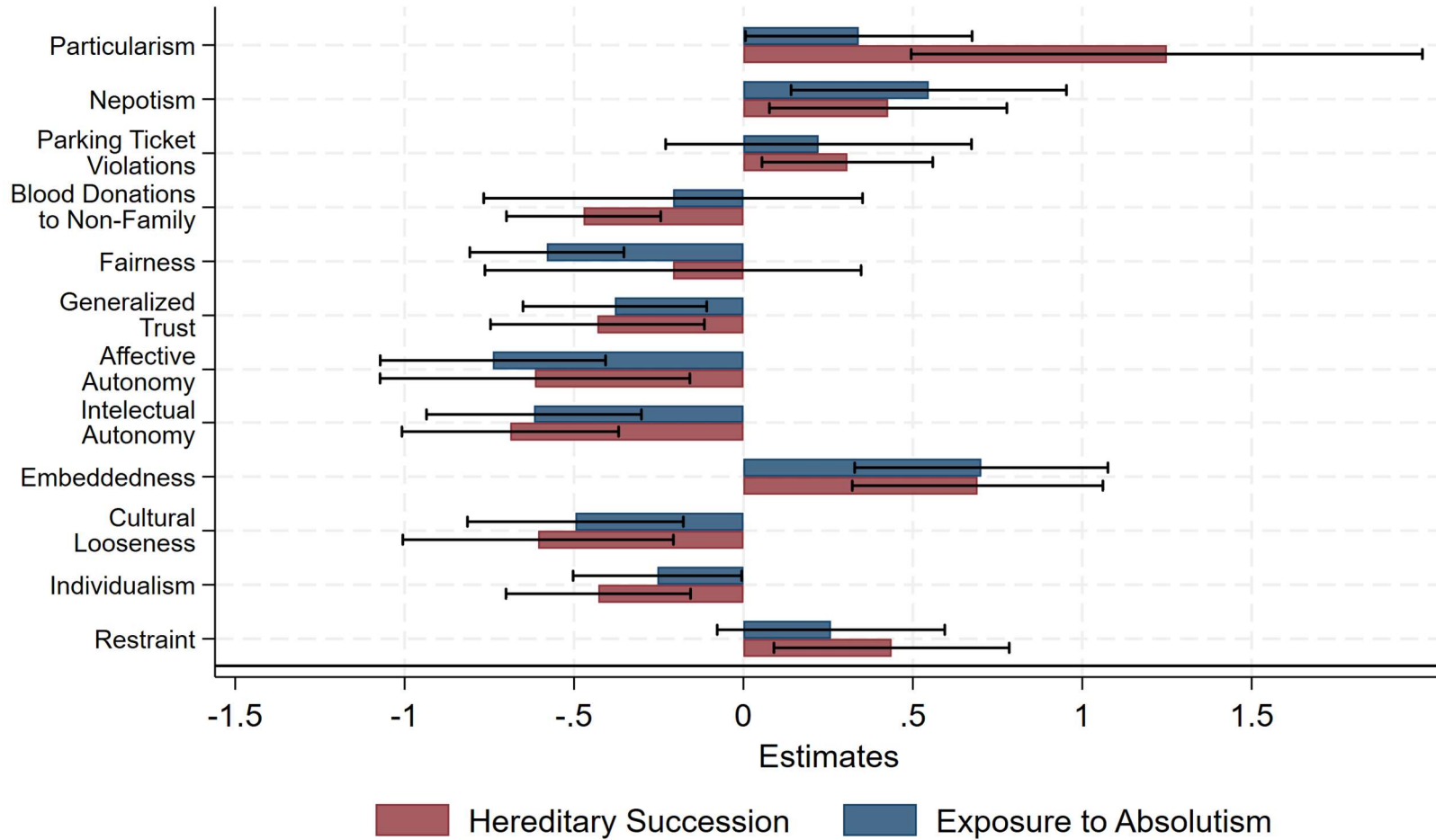
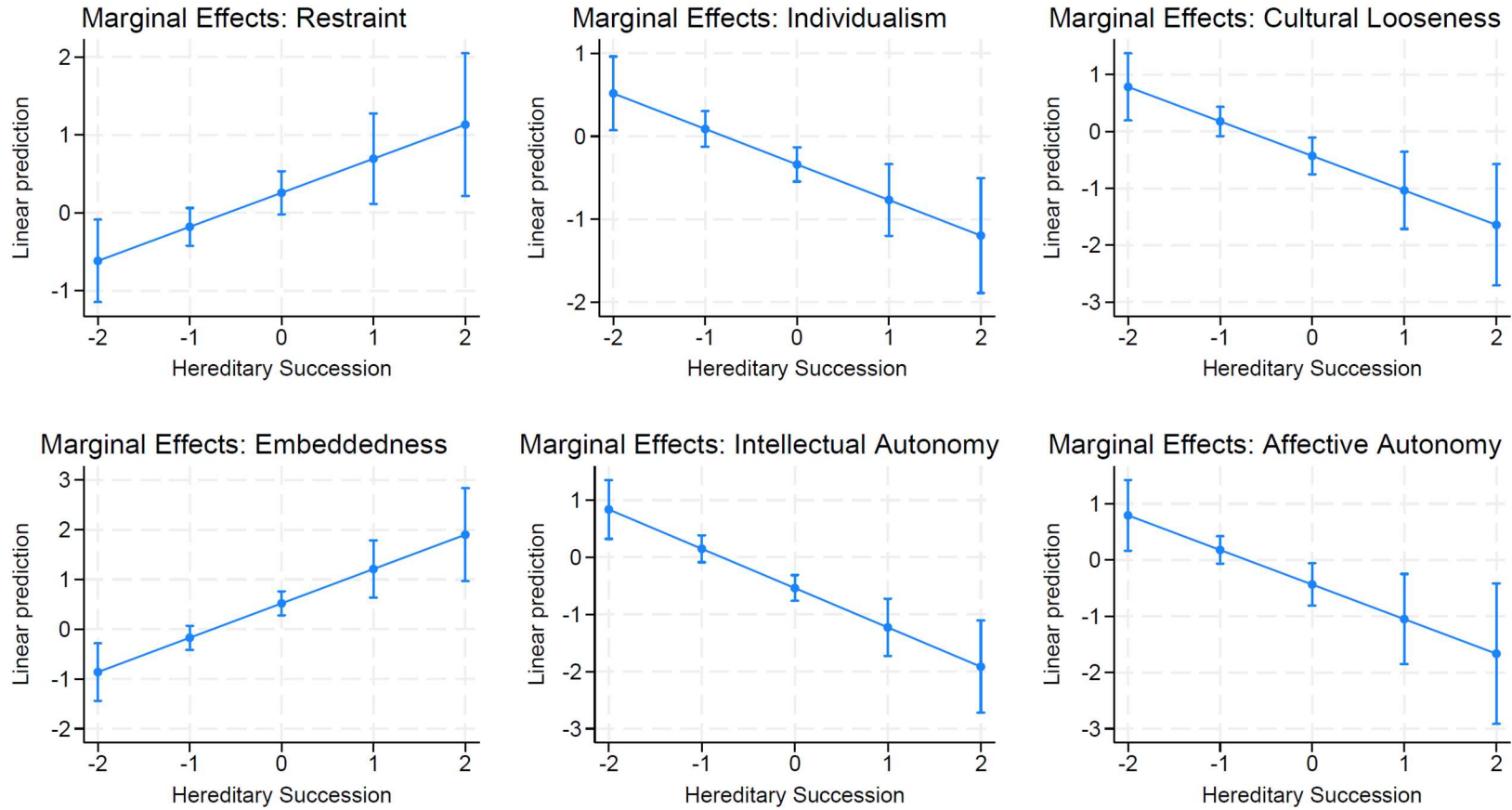


FIGURE VII. AVERAGE MARGINAL EFFECTS OF HEREDITARY SUCCESSION ON CONFORMITY



Notes. The X-axis represents the number of standard deviations in the variable hereditary succession. The Y-axis represents the number of standard deviations in the corresponding cultural trait. Dependent variables are identified in the graph title. The marginal average effects correspond to the main estimations including ethnographic and contemporaneous controls.

FIGURE VIII. EXPOSURE TO ABSOLUTISM AND CULTURE IN ACROSS CITIES.

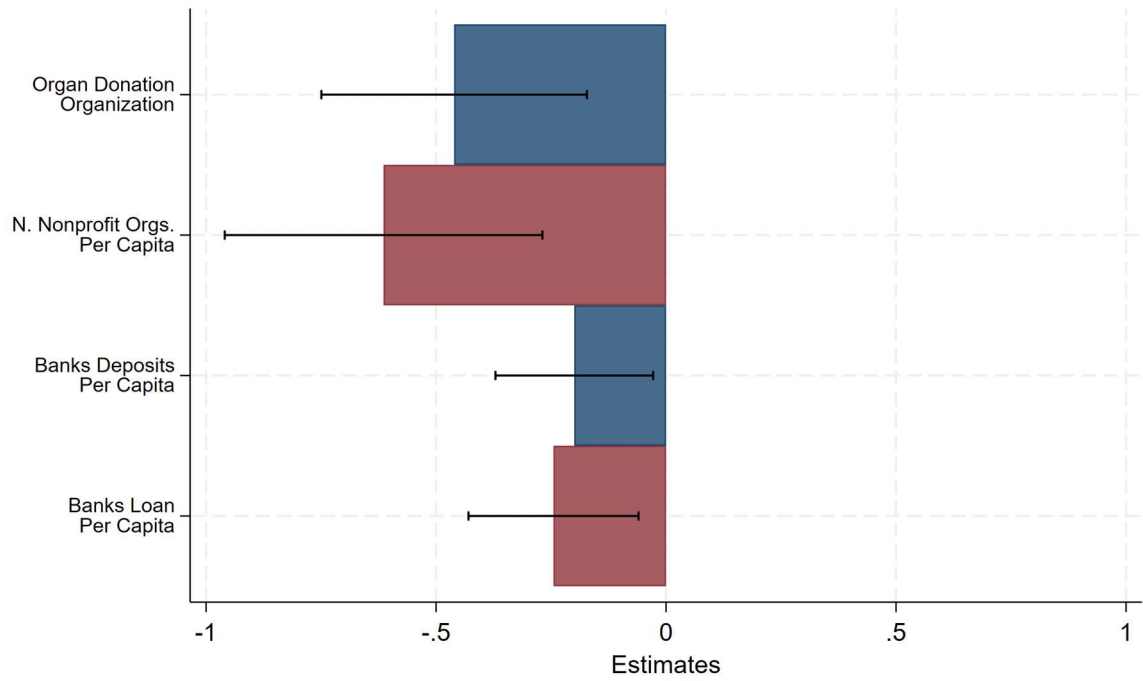


FIGURE IX. DESPOTIC POLITICAL INSTITUTIONS AND CULTURE AT THE INDIVIDUAL LEVEL.

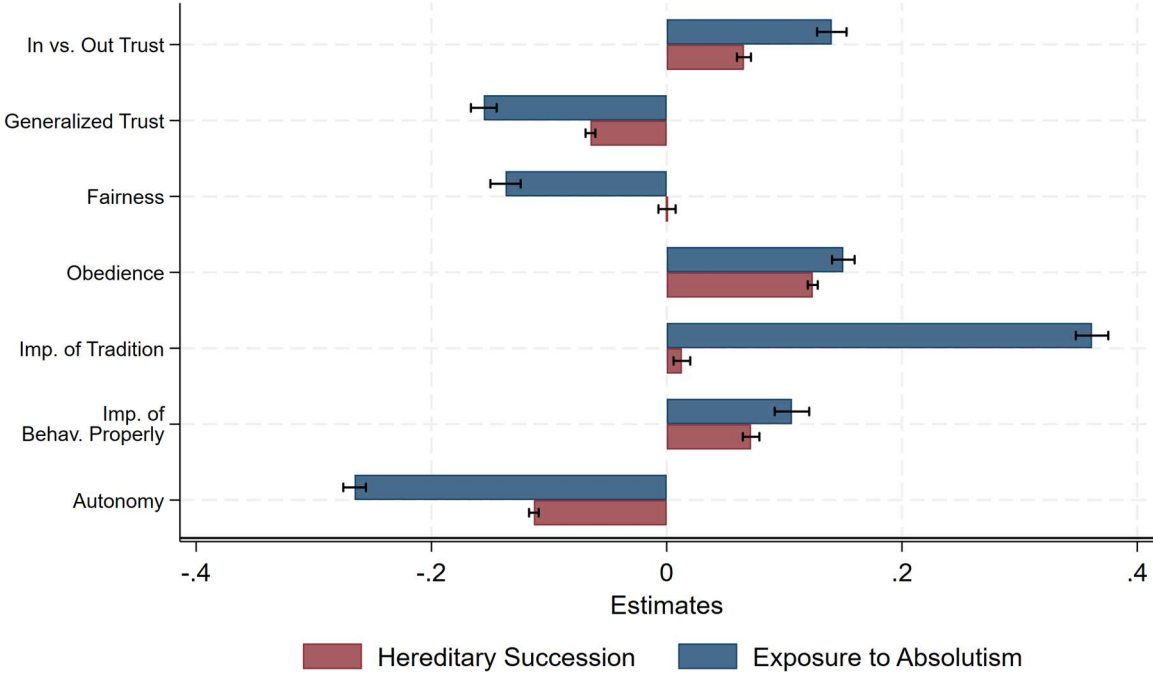




FIGURE X: HISTORICAL POPULATION DENSITY AND HEREDITARY SUCCESSION

