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Religions, Rulers, and Conflict

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ABSTRACT: We offer new data and a new analytical approach to examine the roots of today's civil conflicts that lie deeply in religious and political history. Religion's effect on today's conflicts come not from contemporary fractionalization or polarization, but from the deep-rooted effects of historical fragmentation coupled with rulers who could manipulate divisions by favoring co-religionists. To test the resulting hypotheses, we use a new dataset that includes annual information regarding the religious and political histories of today's societies since the year 1000. We run regression analysis at both country and ethnic group levels. The results show that the likelihood of contemporary new conflicts is higher in societies that historically experienced religious fragmentation with rulers who shared religion with one of the groups and could thus favor coreligionists over others. Economic inequality and political grievances served as channels of transmission.

KEYWORDS: conflict, religion, favoritism, discrimination, historical roots, grievance, inequality

***JEL* CODES**: D63, D74, J15, N30, O50, Z12

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By

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1. INTRODUCTION

Anecdotal evidence suggests a close association between religious differences and civil conflicts. Many recent conflicts around the world have been between parties that differ along religious lines, or they involve groups that define themselves through religious affiliation in their opposition against rulers (Svensson and Nilsson, 2018). Researchers, however, have struggled to find robust empirical results regarding how these differences lead to civil conflicts. The results of their analysis, typically based on standard measures of religious diversity, such as indices of fractionalization, polarization, and Gini, have been mixed and inconclusive. [1]

We introduce a new approach and novel data to estimate the effect of religious differences on civil conflicts. Our approach has two main components. First, we shift the focus from contemporary characteristics of societies to historical roots. Rather than use measures of religious distribution in today's societies, we develop new measures based on religious differences in history. Second, we adopt a political economy perspective by considering the importance of religion for the political legitimacy of rulers. Religion could play a legitimizing function for rulers vis-à-vis citizens by lowering costs of tax collection from co-religionists. In return, the rulers could favor this group over others in the allocation of public goods or economic rights and resources. The effects of this differential treatment accumulate over time, creating grievances and inequalities that may lead to future conflicts.

This approach allows us to examine the roots of today's civil conflicts that lie deeply in religious and political history. We argue that new civil conflicts are more likely in societies that historically experienced religious fragmentation in a way that could motivate rulers to favor co-religionists over others. History is replete with examples of religious group favoritism by rulers, such as when military service or certain prestigious occupational opportunities were reserved for members of a ruler's own religious group or when states adopted official religions that received exclusive support for personnel, buildings, and activities (Johnson and Koyama, 2019; Coşgel and Miceli, 2009; Coşgel, Histen, Miceli, and Yıldırım, 2018). The upshot of the argument is that today's religious conflicts arise not because of religious fragmentation in contemporary societies, nor even merely because of religious fragmentation in history, but because historical fragmentation was coupled with rulers who had reason to favor co-religionists, which in turn caused the accumulation of inequality and grievances over time.

To examine the argument empirically, we have developed a novel dataset, called the "Historical Polities Data" (HPD), from which we construct indices of historical religious structure to measure degrees of fragmentation and favoritism at the national and

[1] Arbatli, et al (2020: 732-4), Basadeau (2016: 228-9), McBride and Richardson (2012: 118), Montalvo and Reynal-Querol (2019: 257), Svensson (2020).

subnational levels. The dataset comprises the religious and political histories of territories corresponding to today's nations since the year 1000. It includes annual data on the main and secondary religions of the population and the religions of political rulers.

At the national level, we use the information from the HPD to construct proxy indices of religious structure by calculating the (weighted) fractions of years during which a territory experienced religious fragmentation in its history and during which religious fragmentation coincided with shared religion with rulers. To demonstrate empirically the value-added of our key indices relative to other well-known measures of religious distribution and power relations, we first report the coefficients of correlation between them. The low levels of correlation indicate that our historical indices indeed differ significantly from contemporary measures previously used by other researchers. In addition, we run "horse race" regressions to compare the explanatory power of our indices against other measures. The results show that our key variables remain the same in sign and significance as we include other measures individually or altogether in the analysis.

Since the territorial borders of today's countries may be endogenous to historical conflicts and religious fragmentation and favoritism, we run additional analysis at the subnational level. Economists have recently highlighted various forms of endogeneity between nation states and various political economy concerns, such as population diversity, trade regimes, political system, civil conflicts, and public good provision (Alesina, Giuliano, and Reich, 2019; Alesina, Reich, and Riboni, 2017; Alesina and Spolaore, 2003; Alesina, Spolaore, Wacziarg, 2000; Desmet et al., 2011). Prompted by the concern over endogeneity at the national level, many empirical papers in the recent "deep roots" literature have sought to exploit variations across subnational units such as administrative regions, artificial boundaries, and precolonial ethnic homelands.

To address the endogeneity problem related to the use of nations as the unit of analysis, we shift the unit to the subnational level by merging information from HPD with ethnic group level data from the recent Ethnic Power Relations (EPR) dataset. The new "ethnic-dimensions" version of the EPR dataset has the additional advantage of including information about the religious composition of ethnic groups, which allows us to construct our key indices at this level (Bormann, Cederman, and Vogt, 2017). In addition to mitigating potential endogeneity concerns with national borders, running dual analyses at the national and sub-national levels offers the extra benefits of exploring the effects of historical religious fragmentation and favoritism on conflict at different scales, disentangling the impacts within and across ethnic groups, and reducing potential concerns regarding the relationship between conflicts and population movements (Arbatlı, et al., 2020: 729-30).

Our analysis includes several exogenous variables to mitigate endogeneity concerns regarding the association between civil conflicts and our key indices of historical religious structure. Ideally, we would have addressed these concerns by applying a standard identification strategy, such as instrumental variable analysis. However, the instruments previously used in the literature for religious diversity, such as the travel cost (walking time) to centers of universal religions of the world (Cosgel, et al., 2018), may violate the necessary exclusion restriction in this context. Unfortunately, no other standard identification strategy, such as difference in differences analysis and regression discontinuity design, is feasible in our setting. Therefore, for a credible strategy, we include a wider set of exogeneous geographical, climatological, and historical controls than those

typically used in this type of analysis. Specifically, as we detail below, our baseline analysis at the country level includes terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, an island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserves, genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontier, historical population, state antiquity, time since Neolithic transition, and the duration of human settlement and continent fixed effects. In other specifications of the model, we include measures of colonial history, legal origins, contemporary population size and diversity, GDP per capita, and institutions. Although some of the latter variables may potentially introduce endogeneity concerns, we include them in the analysis incrementally to see how their inclusion affects the coefficients of our key variables. At the subnational level, we similarly control for various geographic and climatic variables, group size, country fixed effects, and regional origins of race fixed effects.

The results of regression analyses at both the national and subnational levels support our argument regarding the effects of historical religious fragmentation and favoritism on new civil conflicts. At the national level, the results of OLS analysis show that the onset of civil conflicts in the post-1960 period have been significantly higher in societies that historically experienced a higher frequency of episodes during which religious fragmentation coincided with shared religion with the ruler. This finding indicates the legacy effect of political and economic favoritism along religious lines by past rulers.

The results of analysis at the ethnic group level complement those at the national level by providing further clues regarding the origin of the legacy effect. Our findings show that new conflicts were more likely to involve ethnic groups with religions that historically differed from that of rulers in fragmented societies. This is reasonable because we would expect the legacy effect to originate more among disfavored, non-coreligionist groups than among coreligionists who benefited from past favoritism. Overall, the results support the main argument that religion's effect on today's conflicts come not from contemporary or historical religious fragmentation, but from the deep-rooted effects of historical fragmentation that was coupled with rulers who favored co-religionists in fragmented societies.

We perform various tests to check the robustness of our results to alternative specifications of the estimation model. For robustness at the country level, whereas the baseline model considers the onset of any conflict as the dependent variable, we run the same analysis with different measures that consider conflict intensity, subcategories of governmental and territorial conflict, and the difference between religious and nonreligious conflicts. In addition, we test to see whether our results are sensitive to the exclusion of certain geographic regions from the dataset, the inclusion of religion shares and other measures of contemporary diversity that allow for intergroup distances, and the variation of the discount rate used in our key indices of historical religious structure. Similarly, we check for robustness to considering selection on unobservables, accounting for spatial dependence based on a spatial autoregressive (SARAR(1, 1)) model, and recalculating the values of our key variables of interest based on alternative thresholds for secondary substantial religious groups. Finally, we apply our framework to historical conflicts between the fifteenth and eighteenth centuries. At the ethnicity level, due to data

restrictions, we are able to run a smaller number of robustness checks. Specifically, we consider different types of conflict by running the same analysis separately for governmental and territorial conflicts. In addition, we test for the sensitivity of our results to the size of ethnic groups in the dataset by sequentially excluding smaller groups from the analysis. Similarly, we include political exclusion as a variable in the analysis to disentangle the effects of religious and ethnic exclusion. Further, we exclude the new world from the sample to consider the question of whether our results would change across geographic regions of the world in which ethnic groups had vastly different historical experiences. Finally, we include in the analysis the case of historical ethnoreligious uniformity with non-coreligionist rulers to examine the effect of ethnic discrimination by non-coreligionist rulers in not just fragmented societies but in homogenous ones as well. These tests show that our results are highly robust to various alternative specifications in the analysis at both levels.

Regarding potential channels of transmission, based on our theoretical reasoning, we would expect grievances and inequality to be among the important proximate factors that transmitted the effect of shared religion with rulers in fragmented societies to today's conflicts. To test this expectation at the country level, we use the group grievance index of Fund for Peace and a measure of income inequality from Alesina, et al. (2016). The results support the argument that historical religious fragmentation, compounded by rulers who could favor co-religionists, raised the likelihood of contemporary new civil conflicts through the mediating channels of grievances and inequality. We run parallel analyses at the subnational level by using an index of political grievances from the All Minorities at Risk dataset (Binnir, 2018) and a measure of horizontal economic inequality among ethnic groups from Cederman, et al., (2015). Our analysis shows that economic inequality and political grievances among disadvantaged subnational groups served to mediate the effect of historical ethnoreligious fragmentation and favoritism on the onset of civil conflicts.

This paper is closely related to the literature on the association between religion and civil conflicts. [2] Whereas previous studies used traditional measures of religious distribution in modern societies, we introduce novel measures by shifting focus to historical fragmentation and favoritism. Early empirical studies in the literature typically used indices of fractionalization to measure the effect of religious diversity on civil conflicts. They were unable to find robust results, however, largely because indices of fractionalization were unable to capture aspects of religious fragmentation relevant to conflict (Montalvo and Reynal-Querol, 2019: 257). Although the later introduction of indices of polarization has enhanced the analysis of the effect of *ethnic* diversity on conflict, researchers have been less successful in the analysis of the effect of *religious* diversity, likely because of their continued reliance on data for modern societies.[3] By introducing

[2] Our analysis is also related to a body of literature that explains conflict through religion-based hatred and irreconcilable hostility between groups (Huntington 1996). Rather than consider the hatred and hostility as being a matter of current religious beliefs and preferences, however, we examine their historical roots, and use an empirical strategy to estimate their effect on conflict.

[3] For the association between ethnic polarization and civil conflicts, see Montalvo and Reynal-Querol (2005) and Esteban, Mayoral, and Ray (2012). See also Arbatli, et al (2020: 732-4), Basadeau (2016: 228-9), Collier and Hoeffler 2004; Fearon and Laitin, 2003; Huber and Mayoral, 2019; McBride and Richardson (2012: 118), Montalvo and Reynal-Querol (2019: 257), Svensson (2020) for observations regarding the success of standard measures of religious diversity.

new data and measures of historical fragmentation, we contribute the first robust empirical analysis of the effect of religious differences on conflict.

Our analysis is also closely related to the literature on the effect of political favoritism on conflict. There is a large interdisciplinary literature on contemporary ethnic favoritism by rulers and on the implications of such group favoritism for various political economy outcomes (Bates, 1983; Posner, 2005; Burgess et al., 2015; De Luca et al., 2018; Ejdemyr, et al, 2018; Franck and Rainer; Hodler and Raschky, 2014; Kramon and Posner, 2013; Padró i Miquel, 2007, 2012). Studies have shown that ethnic favoritism in contemporary societies generates political grievances, which have led to civil conflicts (Cederman,et al, 2013). Researchers have extended the analysis to multiple, cross-cutting fragmentations, such as ethnoreligious and ethnolinguistic favoritism. (Borman, et al, 2017; Isaacs, 2017; Selway, 2011). We contribute to this literature by providing a new approach based on ethnoreligious history and an associated new measure of historical ethnoreligious favoritism. Our analysis shows that historical religious favoritism affected civil conflicts separately from contemporary ethnic favoritism.

Finally, our analysis contributes to the recent literature on the deep roots of comparative economic development and political economy, particularly the newly emerging approach regarding the roots of civil conflict (Arbatlı, et al., 2020; Ashraf and Galor, 2018; Nunn, 2014; Spolaore and Wacziarg, 2013). Rather than examine proximate factors for explanation, scholars in this literature have analyzed more fundamental causes deeply rooted in long-term history. Introducing this approach to the origins of civil conflict, Arbatlı, et al. (2020) have shifted focus from the distributional characteristics of contemporary societies to variations in population diversity determined predominantly during the exodus of humans from Africa tens of thousands of years ago. Consistent with this approach, we draw attention to the roles played by the degrees of religious fragmentation of a population in history and historical group favoritism by rulers along religious lines. We contribute to this literature a new dataset and results that uncover the religious and political roots of today's civil conflicts that lie deeply in history.

2. RELIGIOUS LEGITIMACY, POLITICAL FAVORITISM, AND CIVIL CONFLICT

It seems fairly obvious to hypothesize that religious fragmentation in a society represents a potential source of civil conflict. Although the linkage may seem self-evident, scholars so far have failed to determine the specific pathway through which religious fragmentation causes conflict. It is necessary and important to investigate the linkage to gain a fuller conceptual understanding of the causes of conflict. The particular pathway that we propose is based on previous work that has emphasized the role of religion as a legitimizing force for government.[4] Specifically, religious leaders declare a ruler to be divine or divinely inspired, which then lowers the costs of tax collection. In return, the state may favor members of that religious group by giving it preferential access to various public goods or other economic rights or resources. Over time, however, this group favoritism can lead to the accumulation of inequality and grievances that may eventually erupt into open conflict.

[4] See, for example, Cosgel and Miceli (2009) and Cosgel, et al. (2012).

To understand this logic, note that in societies with multiple religious groups, a situation that we take as given, the religious community may not speak with a consistent voice with respect to the policies of the secular government. In particular, one religion may be more sympathetic to the ruler or more willing to grant legitimacy to the government's actions. This will be especially true if the ruler is actually a member of one of the religions. In that case, members of the ruler's religion will naturally be less resistant to paying taxes as compared to members of other religions, and as a consequence, the ruler will find it in his material interests to shift resources toward members of the favored religion to the point where marginal tax revenues are equalized across groups.

To illustrate this mechanism more formally, suppose there are two religions in a given society, one of which includes the ruler as a member. Let the ruler's religion comprise a fraction α of the population, while the other religion comprises the remaining fraction, $1-\alpha$. We make no assumption about α—i.e., the ruler's religion may constitute a majority or a minority of the population. We assume that the taxable output of each group (its "tax capacity") depends on the allocation of public goods (broadly defined) and economic rights and resources in society, which is under the control of the ruler. For simplicity, we suppose that there is a fixed supply of such resources, normalized to one, which is divided between the two groups. Let θ be the fraction assigned to the religion shared by the ruler, while $1-\theta$ is the fraction assigned to the other religion. Finally, let the per-capita gross output of each group be given by a function $B(\cdot)$, which is increasing and concave in the allocation of resources to that group. Members of each group are therefore assumed to be equally productive, with output depending only on each group's access to resources within society. The resulting overall level of taxable output in society, or total tax capacity, is thus equal to $\alpha B(\theta)+(1-\alpha)B(1-\theta)$.

The amount of taxes actually collected, however, will necessarily fall short of the maximum potential taxes due to collection costs, reflecting citizens' resistance to taxation. We capture this by a parameter δ, which reflects the fraction of potential revenue dissipated by the process of collection. Here is where legitimacy comes into play: if the ruler is perceived of as being more legitimate by one of the religious groups (presumably his own), members of that group will be less resistant to paying taxes, and so tax collection costs will be lower. Thus, if δ_1 is the cost of collection for members of the ruler's religion, and δ_2 is the cost for members of the other religion, then $\delta_1<\delta_2$. The actual taxable output thus becomes

$$\alpha B(\theta)(1-\delta_1) + (1-\alpha)B(1-\theta)(1-\delta_2) \qquad (1)$$

The ruler will choose θ to maximize this quantity, which yields the first-order condition[5]

$$\frac{B'(\theta)}{B'(1-\theta)} = \frac{(1-\alpha)(1-\delta_2)}{\alpha(1-\delta_1)} \qquad (2)$$

It follows that if tax-collection costs are equal, resources would be assigned to the two groups strictly in proportion to their sizes, which presumably would not represent a source

[5] The second-order condition for a maximum is satisfied given the concavity of the B functions.

of grievance across groups. In other words, access to resources would be roughly equal on a per capita basis.

However, if members of the ruler's religion view him as being more legitimate, as we have hypothesized, that group will receive a disproportionate share of resources, reflecting their greater willingness to comply with taxation.[6] By resulting in the overallocation of resources and rent-seeking opportunities to coreligionist groups, this unequal treatment will likely generate wealth differentials between religious groups in the society. The differential will thereby generate incentives for the groups to engage in conflicts due both to grievances (arising from the initial discriminations and wealth differential) and greed (arising from the desire to claim a greater share of resources, regardless of initial distribution). Of course, a rational ruler will recognize this threat and will therefore presumably strive to limit the discriminatory treatment to a degree that just avoids an uprising.[7] Individual rulers, however, will tend to be shortsighted in their calculations and will fail to foresee the *accumulation* of greed and grievances over time, which may eventually ripen into future conflict. Alternatively, a ruler may simply miscalculate the degree of discrimination that will trigger violence at any point in time. In any case, according to this theory, it is not the existence of religious fragmentation *per se*, nor the majority status of one religion, that are the sources of conflict. Rather, it is the consistent favoritism of one group over the other, owing to the legitimizing function of religion, which is the actual causal mechanism.

3. MEASURING HISTORICAL RELIGIOUS FRAGMENTATION AND FAVORITISM

To implement our arguments empirically, we introduce simple indices of historical religious structure that measure weighted fractions of years with fragmentation and shared religion with the ruler (to serve as proxy for favoritism) in each society's history. We construct these indices in two stages. We first define two dummy variables that for each territory and time period mark whether the territory experienced substantial religious fragmentation and whether the ruler shared religion with a substantial religious segment. For a simple measurement that is feasible for data collection in history, the first dummy variable equals one if a sufficiently large fraction of the population adhered to a secondary religion during that period. We describe below the empirical implementation of this definition. Given this simple conceptualization of religious fragmentation in a territory, the second dummy variable equals one if the ruler adhered to the same religion as the main or substantial secondary religion in the territory. Based on the argument of the previous section regarding the implication of shared religion for favoritism, we consider this second dummy variable to be an indication of the presence of political favoritism.

Interactions of the two dummy variables give us four distinct ways in which the political ruler's religion could differ from, or be the same as, the main and/or substantial secondary religious groups in the population. Specifically, in a given year 1) the population could be uniform in a territory (i.e., no substantial secondary religion exists), and the ruler could share religion with the population; 2) the population could be uniform, but the ruler

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[6] Specifically, (2) implies that $\partial\theta/\partial\delta_1<0$, given $B''<0$. Thus, if $\delta_1=\delta_2$, $\theta/(1-\theta)$ will be proportional to $\alpha/(1-\alpha)$, but as δ_1 falls, θ will rise, all else equal.

[7] See Cosgel and Miceli (2009) for a formal model of this.

could have a different religion from the population; 3) the population could be fragmented (i.e., a substantial secondary religion could exist), and the ruler could adhere to the main or the secondary religion; and finally 4)the population could be fragmented, but the ruler's religion could differ from both the main and secondary religions.

In the second stage, using a procedure adapted from Bockstette, et al. (2002), we aggregate this information over time to calculate the corresponding weighted cumulative indices. Formally, let *f* be a dummy variable that marks the presence of religious fragmentation in the population, and let *s* likewise denote shared religion between the ruler and segments of population. Define $G(f,s)$ to be a dummy variable that equals one for specified values of *f* and *s,* and zero otherwise. For example, $G^t(0,1)$ will equal one for a territory in time period *t* if the population was religiously uniform (f=0) and the ruler shared the same religion as the population (s=1) at that time period.

Consider a time span of *T* periods. We define the general index of historical religious structure (*HRS*) that will measure the weighted frequencies of each of the four possible cases of historical religious fragmentation and favoritism, as a function of the values of *f* and *s*, as follows:

$$HRS(f,s) = \frac{1}{\pi}\sum_{t=1}^{T}(1+\rho)^{t-T}\, G^t(f,s) \ , \qquad (3)$$

where π is a normalization parameter such that $\pi = \sum_{t=1}^{T}(1+\rho)^{t-T}$. We consider the effect of time through ρ, a discount rate, such that $\rho \geq 0$. If ρ =0, the index puts equal weight on all historical periods, while $\rho > 0$ emphasizes the more recent periods. The resulting indices range from 0 to 1.

The general index allows us to calculate the weighted frequencies of the four possible ways in which territories could experience religious fragmentation and favoritism over time. For example, the value of $HRS(1,1)$ in a territory equals the weighted fraction of years during which the population was religiously fragmented (f=1) and the ruler shared religion with a segment of the population (s=1), indicating the territory's historical experience with religious fragmentation with coreligionist rulers. Similarly, $HRS(1,0)$ equals the weighted fraction of years with religious fragmentation in the population but no shared religion with the ruler, a measure of historical religious fragmentation without favoritism. As we will detail below, given our interest in the effects of religious fragmentation, we will put greater emphasis on these two categories in our regression analysis by lumping the other two possibilities (i.e., the cases of religious uniformity with or without shared religion with the ruler) into a single group as the reference category.

To implement these indices, we use a unique dataset called "Historical Polities Data (HPD)," which includes annual historical information on the territories occupied by today's nation states since the year 1000. [8] Combing through a wide variety of sources, a team of research assistants gathered information regarding the basic characteristics of these territories during this time period, including the religion of political rulers and the main and substantial secondary religions of the population. In cases of conflicting information about a particular variable, we looked for consistency by giving priority to sources with comprehensive coverage, such as Encyclopædia Britannica, the "Country Studies" collection

[8] For a detailed description of the construction of this dataset, see Coşgel (2016).

of the Library of Congress, and the book series "Cambridge Histories Online." Rather than restrict the dataset to territories of certain size, duration, or type, we included all territories for which we could find complete information.

For each territory and year, the HPD identifies the main religion as the one that had the highest percentage of adherents. The benchmark to determine whether other substantial religious groups existed is whether the secondary religion's population share exceeded ten percent, if this information was available. For recent centuries, estimates of population shares of religious groups can be found in Brown and James (2015), which in some cases goes back to the 1700s. For earlier centuries, we used non-quantitative information from our sources to identify the main religion and to determine whether a substantial secondary religion existed.

We categorized religions into groups to facilitate systematic analysis. For indigenous religions, we recorded as much specific information as was available regarding differences within a territory, but we coded them under a single category to maintain a consistent standard across territories. We did not differentiate, for example, among the varieties of Chinese folk religions or among the branches of Hinduism that have developed in India over the centuries. In the same vein, we used the coding standards of recent data on historical religious populations by treating broad categories of sects in Islam (Sunni, Shia, Kharijite) and Christianity (Catholic, Orthodox, Protestant) as distinct religions, but we did not further differentiate among the subcategories of these groups.[9]

Regarding the religions of rulers, we first identified the polities that ruled each territory since the year 1000. A basic question was the presence of a state in a territory. We used the data from Bockstette, et al. (2002) and Coşgel, et al. (2018) to determine state presence and the characteristics of polities on an annual basis. This information includes the religions of political rulers, which we recorded based on the same system of coding that we used for the religious groups in the general population. For the pre-state or pre-colonial periods of a territory's history, for which we typically lack written records or clear archeological evidence on their political characteristics, we assumed the ruler's religion to be the same as the population.

Given the ambitious scope and broad temporal and geographic coverage of the HPD, the final product naturally includes various imperfections caused by the difficulty of gathering and interpreting the required information. We sometimes lack local details, for example, regarding the precise timing of the (forced) conversions of the indigenous peoples that followed certain conquests, such as during the Spanish colonization of the Americas. As noted above, we defined some of our variables in a binary format or based them on broad categories in order to ensure consistency across territories and time periods. Although some of our procedures may have caused errors in measurement, we believe that these errors have not biased our results systematically.[10]

Finally, we used the procedure outlined above to calculate the four indices of historical religious structure for analysis. For a descriptive summary of these indices, we

[9] Any categorization of religions is inherently problematic due to the difficulties of comparison and standardization across different traditions. Rather than introduce bias by implementing our own criteria, we simply used the broad categories commonly used in recent quantitative studies.

[10] See Coşgel (2016) for a detailed discussion of the development of "Historical Polities Data" and its limitations and areas of further development.

show in Table 1 their mean values at T=1960 (the beginning date of the data on civil conflicts) for various levels of ρ, the discount rate. Although our dataset includes information on the religious and political histories of over 190 of today's nation states, the averages reported in Table 1 are based on the 150 states for which we have comprehensive data from the UCDP/PRIO Armed Conflict Dataset and for other control variables used in the regression analysis.

Table 1
Indices of Historical Religious Structure

Index	ρ=0	ρ=0.001	ρ=0.003
HRS(0,1): Historical religious uniformity with coreligionist ruler	0.54	0.50	0.42
HRS(0,0): Historical religious uniformity with non-coreligionist ruler	0.10	0.10	0.11
HRS(1,1): Historical religious fragmentation with coreligionist ruler	0.30	0.32	0.36
HRS(1,0): Historical religious fragmentation with non-coreligionist ruler	0.06	0.08	0.11

Note: ρ is the discount rate used in (3) above.

The variation in mean values across the three columns illustrates the relationship between the values of ρ and the indices. Moreover, these values indirectly show the evolution of historical religious structure in the world over time. Whereas the mean value of the first index falls as the discount rate goes up from 0 to 0.003, the means of the other three indices increase corresponding to the same change. Since the higher values of the discount rate put greater weight on more recent periods, the fall in the value of the first index indicates that the territories corresponding to today's nations had more uniform populations who shared religion with rulers in the distant past than in recent centuries. The rise in the values of the last two indices corresponding to higher values of the discount rate likewise shows that the world on average experienced greater religious fragmentation, with or without coreligionist rulers, over time.

Regardless of the discount rate, the figures in Table 1 make it clear that the dominant form of historical religious structure in the world during the period between 1000 and 1960 was religiously uniform populations who shared religion with rulers. In the case of no discounting (i.e., ρ=0), this form on average constituted 54 percent of the years during this period, followed by the case of territories that experienced religious fragmentation with coreligionist rulers (30%). The low values of the second (10%) and fourth (6%) indices show the relatively lower frequency of cases in which the ruler's religion differed from that of the population (i.e., no basis for favoritism), with or without religious fragmentation in the population.

For our analysis, we chose a low discount rate of ρ=0.001 because of our focus on deep historical roots. At this rate, the contribution to our index of having a value of 1 in the year 1000 reduces to about 38 percent of the contribution of having a value of 1 in the year 1960. To make sure that the conclusions of our regression analysis do not depend on our choices of the discount rate, however, we ran tests of robustness to other rates. As reported

in Appendix B, these tests confirm that our results hold for other values of the discount rate.

We report in Appendix F the individual values of the four indices of historical religious structure in the world at the country level, with ρ set at 0.001. As seen in these numbers, the values of indices vary significantly across territories. The index of historical religious fragmentation with coreligionist rulers, our key proxy variable for political favoritism, ranges between 0 (e.g., Austria, Saudi Arabia) and 1 (Nepal). Similarly, the index of historical religious uniformity with coreligionist rulers, the dominant category, ranges between 0 (e.g., Bangladesh, China, Egypt) and 1 (e.g., Italy, Portugal).

Figure 1
Historical Religious Fragmentation with Coreligionist Rulers

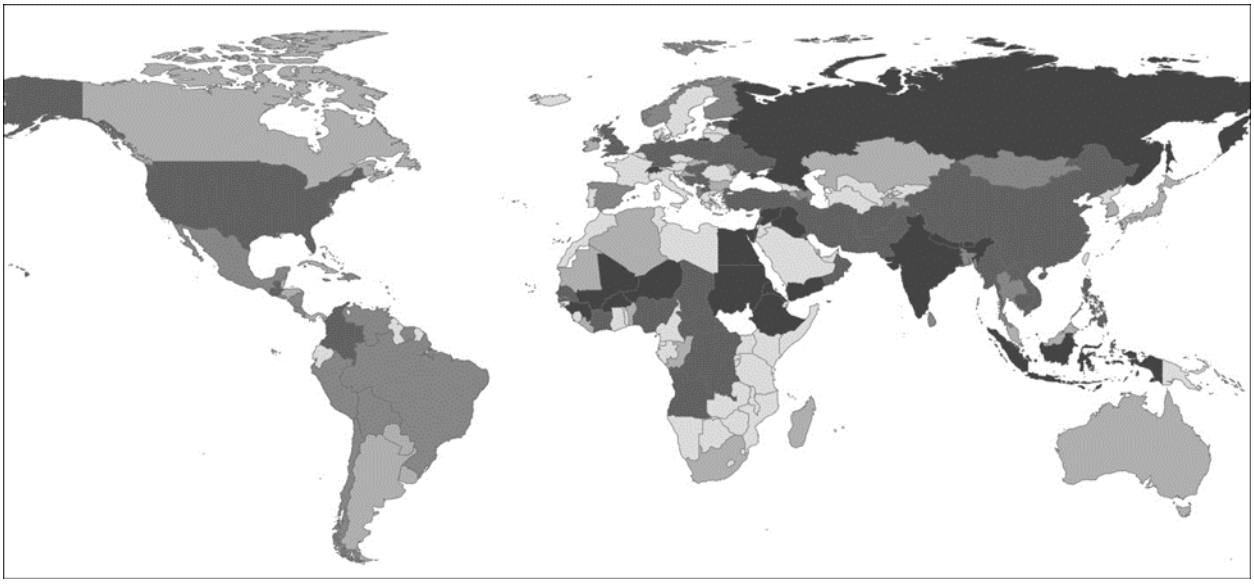


Figure 1 shows the geographic distribution of the index of historical religious fragmentation with coreligionist rulers, the key explanatory variable used in our regression analysis. The darker shades in the figure correspond to higher values of the index. The figure shows interesting patterns regarding the geographic distribution of locations in which the rulers had the opportunity to favor coreligionists in history. This was clearly more likely in the history of parts of western and southeastern Asia and in parts of central Africa and eastern Europe.

4. INDICES OF HISTORICAL RELIGIOUS STRUCTURE VS. OTHER MEASURES

In this section, we examine the relationship between our indices and other commonly used measures of population diversity and ethnic or religious political divisions. Table 2 shows the correlations of our indices with other variables. In addition to reporting correlations with the same four indices as in Table 1, we include an additional index, $HRS(1,\cdot)$ in the first column, which corresponds to combined cases of the last two indices; namely historical

religious fragmentation with and without coreligionist rulers. Since the combined index concerns fragmentation in the population, it provides an appropriate basis for comparison with various indices of population heterogeneity.

The first panel displays correlations among our own indices. In the second panel, we consider various existing measures of population diversity. Conceptually, our index of historical religious fragmentation may seem closely related to the index of genetic diversity introduced by Ashraf and Galor (2013) because of the common concern with deep historical roots. However, since the historical transmission of genes and religious beliefs started from different origins and happened at different rates and along distinct geographic routes and channels (horizontal vs. vertical), we should not expect a high degree of empirical correlation between them. The low and insignificant coefficients of correlation between them confirm this expectation.

The second panel includes various other measures of ethnic, religious, linguistic, and cultural diversity. The measure of diversity most commonly used in the traditional literature is the index of fractionalization, which measures the probability that two randomly drawn individuals from a country belong to different groups. Our index of historical religious fragmentation has a significant and positive correlation with one of the indices of contemporary religious fractionalization, as one would expect. The correlation with the other index of religious fractionalization is weak, however, possibly due to differences in data sources and in levels of aggregation used in categorizing religions. Interestingly, our index of historical religious fragmentation has a high degree of positive correlation with measures of contemporary ethnolinguistic fractionalization.[11] This may be due to the close association that certain religions had with the dominant language of their adherents in their historical spread through conquest. The dominance of Arabic as the spoken language in the Middle East and North Africa, for example, followed the spread of Islam in the region as a result of the Arab conquests. Likewise, the Spanish language became dominant in parts of the Western Hemisphere along with the spread of Catholicism through Spanish conquests. Our index of historical religious fragmentation is also highly correlated with other indices of ethnolinguistic diversity, such as the index of polarization, a measure that considers both the size and interpersonal distance between groups in calculating the extent to which individuals in a population are distributed across them.

Table 2
Correlation Coefficients of Indices with Other Measures

	HRS(1, .)	*HRS*(1, 1)	*HRS*(1, 0)	*HRS*(0, 0)	*HRS*(0, 1)
HRS(1, .) : Historical religious fragmentation	1				
HRS(0,1): Historical religious uniformity with coreligionist ruler	0.8871*	1			
HRS(0,0): Historical religious uniformity with non-coreligionist ruler	0.4324*	-0.0327	1		
HRS(1,1): Historical religious fragmentation with coreligionist ruler	-0.2863*	-0.2932*	-0.0473	1	
HRS(1,0): Historical religious fragmentation with non-coreligionist ruler	-0.9015*	-0.7820*	-0.4244*	-0.1566	1
Predicted genetic diversity[1]	0.0781	0.0554	0.0607	0.1607*	-0.1531
Genetic diversity (ancestry adjusted)[1]	-0.0473	-0.0143	-0.0744	0.1505	-0.0192
Religious fractionalization[2]	0.0226	-0.0203	0.0886	0.0597	-0.0502
Religious fractionalization[3]	0.1800*	0.0482	0.2956*	0.0714	-0.2178*
Religious polarization[4]	0.1444	0.0488	0.2248*	0.1241	-0.1973*
Linguistic fractionalization[2]	0.1952*	0.1970*	0.0377	0.0525	-0.2255*
Ethnolinguistic fractionalization (level-6)[5]	0.3623*	0.3558*	0.0894	-0.031	-0.3594*

[11] Although we report here only the correlation with the intermediate level of aggregation of indices introduced by Desmet, et al. (2012), the correlations are significant for other levels of aggregation as well.

Ethnolinguistic polarization (level-6)[5]	0.2076*	0.2348*	-0.0091	0.0341	-0.2294*
ER ethnolinguistic polarization[6]	0.1123	0.1144	0.0205	0.0743	-0.1489
RQ ethnolinguistic polarization[4]	0.1659*	0.1538	0.0636	-0.0091	-0.1661*
Ethnic fractionalization [2]	0.0647	0.1011	-0.0573	0.0606	-0.0941
Ethnic Greenberg[7]	0.1920*	0.1741*	0.0821	0.0721	-0.2297*
Ethnic inequality[8]	0.120	0.1817*	-0.1075	0.0395	-0.141
Cultural fractionalization.[9]	-0.1862	-0.0775	-0.2337	-0.0084	0.1978
Ethnic segregation[10]	0.1595	0.2260*	-0.0937	-0.093	-0.1237
Linguistic segregation[10]	0.0747	0.133	-0.1062	-0.0596	-0.0494
Religious segrigation[10]	0.2599*	0.1916	0.1944	0.0004	-0.2804*
Percent Muslim[11]	0.2308*	0.1753*	0.1573	-0.0586	-0.2115*
Percent Catholic[11]	-0.3245*	-0.2125*	-0.2876*	-0.1206	0.3890*
Percent Protestant[11]	-0.1632*	-0.1156	-0.1272	-0.0519	0.1915*
Religious discrimination against minority religions[12]	0.2305*	0.2237*	0.0621	0.0435	-0.2572*
Societal discrimination towards religion[12]	0.2622*	0.2788*	0.0232	-0.0274	-0.2580*
Governmental restrictions on religion[13]	0.3127*	0.2819*	0.1368	0.0073	-0.3248*
Social hostility towards religion[13]	0.4003*	0.3824*	0.1279	-0.1094	-0.3618*
Government favoritism of religion index[14]	0.1163	0.127	0.004	-0.0104	-0.1152
Average no. of politically relevant groups per year (1960-2017)[15]	0.3019*	0.3325*	0.004	-0.0711	-0.2790*
Average no. of groups in power per year (1960-2017)[15]	0.1267	0.1368	0.007	0.0442	-0.1505
Average no. of excluded groups per year (1960-2017)[15]	0.2818*	0.3114*	0.0018	-0.0933	-0.2483*
Average no. of groups with regional autonomy (1960-2017)[15]	0.2699*	0.2852*	0.0274	-0.1349	-0.2173*

Sources: [1]Ashraf and Galor (2013); [2]Alesina et al. (2003); [3]Johnson and Grim (2021) ; [4]Montalvo and Reynal-Querol (2005); [5]Desmet et al (2012) [6]Esteban et al. (2012); [7]Desmet et al (2009); [8]Alesina et al. (2016); [9]Desmet et al. (2017) [10]Alesina and Zhuravskaya (2011); [11]Barro and McCleary (2005); [12]Fox (2020); [13] Pew Research Center's Global Restrictions on Religion Data (2016); [14]Grim and Finke (2006); [15] Vogt et al. (2015).

In the third panel we consider some measures of population diversity beyond fractionalization and polarization that have been used in the literature. Among the three measures of segregation, the index of religious segregation has a significant and positive correlation with our index of historical religious fragmentation, which makes intuitive sense. Regarding measures based on simple fractions of religions, our index of historical fragmentation is positively correlated with the fraction of contemporary Muslim population, and is negatively correlated with fractions of Catholic and Protestant populations.

The last panel shows correlations with various measures of ethnic or religious political divisions used in the literature. The correlations of interest in this panel are with our key index of historical religious fragmentation with coreligionist rulers (*HRS*(1,1)). Our index is positively correlated with all of the measures included in the panel, with varying degrees of significance. The correlations are the highest for the index of social hostility towards religion and the average numbers of politically relevant and excluded groups during the period between 1960 and 2017, as reported by the Ethnic Power Relations dataset. The positive and significant correlations of these variables with our index of historical religious fragmentation with coreligionist rulers makes intuitive sense and reflects conceptual similarities.

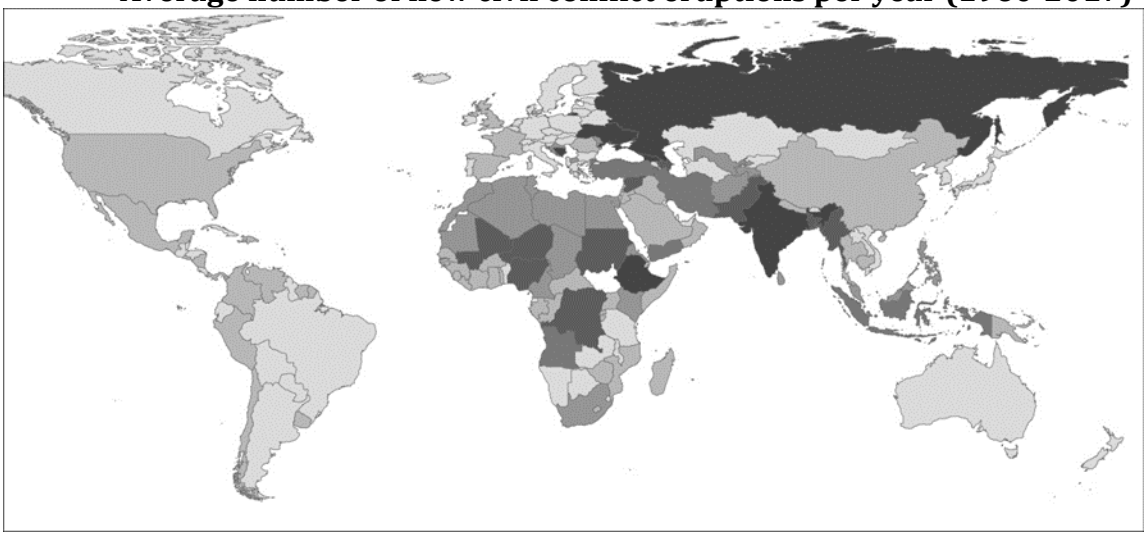
5. FRAGMENTATION, FAVORITISM, AND CONFLICT AT THE COUNTRY LEVEL

5.1. Conflict Data

In this section we use our indices as developed at the country level to run "horse race regressions" against other measures and to investigate our hypotheses regarding the

determinants of civil conflicts. Regarding data on civil conflicts, we employ the commonly used measures available in the UCDP/PRIO Armed Conflict Dataset.[12] This dataset defines civil conflict as "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths."[13] Consistent with the literature, we focus on civil conflicts in the post-1960 period, because most colonies obtained their independence by 1960.

Figure 2
Average number of new civil conflict eruptions per year (1960-2017)



Based on a broad interpretation of our argument regarding the persistent influence of deep-rooted grievances on all types of civil conflicts by all groups, we generate a conflict-year version of the UCDP/PRIO dataset and calculate the average number of new civil conflict eruptions per year during the period between 1960 and 2017 in each country. Figure 2 shows the geographic distribution of this variable throughout the world.

To check for the robustness of our results to this specification, in Appendix B we report the same regressions run with other measures and subcategories of conflicts.[14] We also use variables from the "Religion and Armed Conflict (RELAC) Data of Svensson and Nilsson (2018), which differentiates between religious and non-religious conflicts, to determine how our results apply to this distinction. Appendix D shows the means and standard deviations of various measures of conflict used in our analysis.

5.2. Comparison of the effects on conflict against other measures

Regarding our own measures at the country level, given our interest in the effects of religious fragmentation, we include in the regression analysis only the first two indices; namely the categories of historical religious fragmentation with and without coreligionist

[12] Version 18. See Gleditsch et al., 2002; Pettersson and Eck, 2018.
[13] For the operationalization of the separate elements of this definition of conflict, see http://www.pcr.uu.se/research/ucdp/definitions/.
[14] In general, the literature has focused on three dimensions of civil conflict: onset, duration and incidence. See Sambanis (2004) for a discussion.

rulers. This means that we lump the other two possibilities, the cases of religious uniformity with or without shared religion with the ruler, into a single group as the reference category. Before we conduct the full analysis with controls, however, in this sub-section we compare the effects of historical religious fragmentation and favoritism with those of other well-known measures of diversity and ethnic or religious political divisions used in the literature on civil conflicts.

Table 3 shows the results of unconditioned bivariate regressions of civil conflict on each measure. As seen in the first column, our key index of historical fragmentation with coreligionist rulers is positive and highly significant, as hypothesized. The coefficient of this variable indicates that a continually fragmented country that always had rulers who shared religion with a segment of the population experienced approximately 4.2 percent (0.042*100) additional new conflict onsets on average per year as compared to a religiously uniform country during the period between 1960 and 2017. This unconditioned effect compares favorably against other indices of fractionalization, polarization, and political favoritism. In fact, religious fractionalization seems to have an insignificant effect on civil conflicts in this simplified unconditioned setting, and the effect of religious polarization is significant only at the 5 percent level. The insignificance of the coefficient of our second index in the first column indicates that historical religious fragmentation without political favoritism (ruler did not share religion with population) had no effect on today's civil conflicts, again as hypothesized.

Table 3
Historical Religious Favoritism vs. Other Diversity and Favoritism Measures - Bivariate Regressions

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
HRS(1, 1): Historical religious fragmentation with coreligionist rulers	0.0422***									
	(0.0091)									
HRS(1, 0): Historical religious fragmentation with non-coreligionist rulers	0.0124									
	(0.0127)									
Genetic diversity (aa)		0.2085***								
		(0.0662)								
Ethnic frac (Alesina et al., 2003)			0.0239***							
			(0.0072)							
Ethnolinguistic frac. (Desmet et al., 2012)				0.0358***						
				(0.0094)						
Ethnolinguistic pol. (Desmet et al., 2012)					0.0171**					
					(0.0070)					
Religious frac. (Alesina et al., 2003)						0.0008				
						(0.0090)				
Religious pol. (Montalvo, and Reynal-Querol, 2005)							0.0152**			
							(0.0059)			
Linguistic frac. (Alesina et al., 2003)								0.0303***		
								(0.0082)		
Average no. of excluded groups per year (1960-2017)									0.0022***	
									(0.0007)	

Government favoritism of religion index										0.0015** (0.0008)
Observations	150	150	150	150	150	150	109	145	150	149
R-squared	0.192	0.036	0.042	0.109	0.024	0.000	0.039	0.085	0.136	0.018

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

In Table 4, we report the results of "horse race" regressions between our key indices and other measures of population diversity and ethnic or religious political divisions. As seen in the first row, the coefficient of historical fragmentation with coreligionist rulers remains positive and highly significant even after the previously proposed measures are included in the analysis. Given the potential endogeneity of the additional variables in column (10), the coefficient naturally drops, but still remains positive and highly significant at the 1 percent level.

Table 4
Horserace Regressions

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
HRS(1, 1): Historical religious fragmentation with coreligionist ruler	0.0425*** (0.0089)	0.0406*** (0.0091)	0.0354*** (0.0088)	0.0409*** (0.0096)	0.0422*** (0.0091)	0.0424*** (0.0098)	0.0379*** (0.0088)	0.0344*** (0.0086)	0.0414*** (0.0091)	0.0246*** (0.0078)
HRS(1, 0): Historical religious fragmentation with non-coreligionist ruler	0.0153 (0.0124)	0.0141 (0.0124)	0.0087 (0.0115)	0.0125 (0.0123)	0.0123 (0.0131)	0.0163 (0.0161)	0.0105 (0.0123)	0.0119 (0.0126)	0.0121 (0.0124)	0.0094 (0.0133)
Genetic diversity (ancestry adjusted)	0.2221*** (0.0575)									0.2328*** (0.0560)
Ethnic frac (Alesina et al., 2003)		0.0195*** (0.0062)								0.0050 (0.0094)
Ethnolinguistic frac. (Desmet et al., 2012)			0.0212*** (0.0080)							0.0342* (0.0207)
Ethnolinguistic pol. (Desmet et al., 2012)				0.0063 (0.0072)						-0.0317* (0.0189)
Religious frac. (Alesina et al., 2003)					0.0012 (0.0087)					-0.0101 (0.0108)
Religious pol. (Montalvo, and Reynal-Querol, 2005)						0.0117** (0.0056)				
Linguistic frac. (Alesina et al., 2003)							0.0220*** (0.0066)			0.0137 (0.0090)
Average no. of excluded groups per year (1960-2017)								0.0016** (0.0006)		0.0018*** (0.0005)
Government favoritism of religion index									0.0009 (0.0007)	0.0010 (0.0008)
Observations	150	150	150	150	150	109	145	150	149	144
R-squared	0.233	0.220	0.225	0.195	0.192	0.281	0.233	0.253	0.200	0.380

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

5.3 Confounding factors

The vast interdisciplinary literature on civil conflicts has produced a wide range of variables that have been found to contribute to conflicts. Some of these variables are potential confounders in our analysis because of their likely correlation with both civil conflicts and historical religious structure. Since omitting these variables would have biased our estimates, we include them, if available, in the analysis to account for this bias. For some potential confounders, however, we do not have comprehensive data that can be included in our analysis.

For a credible strategy in cases of confounders for which no data are available, we aim to mitigate endogeneity concerns by including a wider set of controls than those typically used in this type of analysis. For example, although we suspect historical mass conversions and migrations to be potential confounders in the relationship between historical religious fragmentation and civil conflicts, we lack data on these variables. Moreover, standard strategies, such as instrumental variable analysis, regression discontinuity design, or difference in differences analysis, are not feasible to apply in identifying the effect of historical fragmentation and favoritism on conflict. Given the absence of direct data on certain confounders, we address the potential omitted variable bias problem by including various other appropriate controls, as detailed below.

5.3.1 Geography, Climate, and Continents

We include in the baseline analysis various geographical and climatological characteristics of territories identified by researchers as exogenous factors directly affecting civil conflicts (Arbatlı et al., 2020; Blattman and Miguel, 2010; Garfinkel and Skaperdas, 2012), which may also be correlated with historical religious structure. These variables include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserves, and continent fixed effects.[15]

We include ruggedness, elevation, and percent forest because of their likely effect on both conflicts and historical fragmentation. Harsh geographical conditions such as ruggedness and elevation may increase the probability of rebel groups' engagement in insurgencies by reducing their cost of hiding from government forces (Fearon and Laitin, 2003). Moreover, Michalopoulos, et al., (2018) have shown that for the case of Islam, the same conditions could also influence the spread of religions across territories. Since such conditions could thus affect historical religious structure in each territory, we include them in the analysis as controls. Similarly, researchers have found climatic factors like temperature and precipitation to be correlated with civil conflict (Hsiang, Burke, and Miguel, 2013). Such factors may also be primary determinants of the origins and dispersal of religions (Semple, 1911). The common origins of Abrahamic religions (Judaism, Christianity, and Islam) in dry climates, for example, suggests a strong correlation between climate and historical religious structure. To account for this effect, we include percent desert, temperature, and precipitation in the analysis.

[15] The data for ruggedness and percent desert variables are from Nunn and Puga (2012), forest area (% of land area) is from World Bank's World Development Indicators, and other geographic and climate variables are from Arbatli et al. (2020).

Our baseline analysis also includes variables concerning ecological diversity, geographic location and status, agricultural suitability, and continent fixed effects. Ecological diversity may affect conflict through its impact on state capacity, as Fenske (2014) has shown in the context of state centralization in pre-colonial Africa. Since Botero, et al. (2013) has further found ecological diversity to be conducive to emergence of moralizing religions, we include variables in the analysis to control for these effects. Likewise, absolute latitude, distance to the nearest waterway, and island status of territories may affect civil conflict through their impacts on feasible economic activities and income. Through their implication for geographic isolation and access to transportation and communication, these variables could also affect the spread of religions, and hence the historical religious structure of territories. Further, we include certain variables to control for the variation in topography and land use. Topographic variability in a territory has obvious implications for civil conflict because of the implication for the suitability of land for various economic activities and dispersion of incomes. Finally, the baseline model includes continent fixed effects to control for various systematic but unobservable differences across continents that might be correlated with both civil conflicts and historical religious structures.

5.3.2. Historical Controls

The baseline model includes several historical variables that are expected to be correlated with historical religious structure and have been found by researchers to have affected civil conflicts through channels unrelated to historical religious structure. These variables include genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontier, historical population, state antiquity, time since Neolithic transition, and the duration of human settlement.[16]

We control for (ancestry adjusted) genetic diversity in the baseline analysis because Arbatli, et al. (2020) have recently found it to have a positive and highly significant direct effect on the onset of civil conflicts. Moreover, we suspect genetic diversity in a territory to be potentially correlated with historical religious fragmentation via the relationship between the historical migration route of humans and the emergence and spread of religions. Cesur and Yıldırım (2020) have recently uncovered a strong link between religion and genetic diversity based on Durkheim's (1912) argument relating the emergence of religion to the need for cooperation. Taking genetic diversity as a proxy for the need for cooperation, they adopt Ashraf and Galor's (2013) strategy of identifying diversity through the migratory distance of a settlement to the cradle of humankind in East Africa, known as the "Out of Africa" hypothesis. Given the implied link between predicted genetic diversity and religious fragmentation, we mitigate the potential endogeneity

[16] We obtained genetic diversity and historical regional frontiers variables from Arbatli et al (2020), distance to major trade routes from Bentzen et. al. (2017), state antiquity index from Bockstette et al., (2002) and Putterman and Bockstette (2012), Neolithic transition from Putterman (2008), and duration of settlement from Ahlerup & Olsson (2012). We imputed missing values of state antiquity, Neolithic transition and settlement duration with the average value of neighboring countries to get a consistent sample size in regression analysis. We extracted historical population data from HYDE version 3.2 (Klein Goldewijk et al. 2017) by using country shape files from (https://gadm.org/data.html).

concern by including the predicted (ancestry adjusted) genetic diversity as a covariate in our analysis.

In addition, the baseline analysis includes the travel cost (walking time) from a territory to the birthplaces or spiritual centers of missionary/universal religions of the world (Buddhism, Christianity, Islam) as a confounding variable. [17] The reason for exploiting spatial information regarding the country's proximity to religious centers is based on the expectation that this variable might be correlated with both civil conflicts and historical religious structure. We suspect correlation with conflicts because religions might have originated in locations of high conflict and there might be persistence effects, due perhaps to locational characteristics or path-dependent historical processes which might still be exerting influence on contemporary conflicts through processes unrelated to historical fragmentation. Regarding the correlation with religious fragmentation, our reasoning is based on the observation that universal religions increasingly dominated religious markets over time by progressing linearly from their centers to other regions and causing fragmentation along the way. We control for this confounding influence by including travel cost, measured as the walking time, from the center of the nearest universal religion to each country's capital city as a control variable.[18]

A related set of variables included in the baseline analysis concern the location of territories relative to trade routes and technology frontiers. To see the confounding effects of these variables, note that the major centers of world religions, such as Mecca, Jerusalem, Istanbul, and Vatican City, have historically served as, or are proximately located near,

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[17] The specific centers used for our calculations are Lumbini, Nepal (Buddhism); Wittenberg, Germany (Protestanism); Istanbul, Turkey (Orthodox Christianity); Karbala, Iraq (Shia Islam); Mecca, Saudi Arabia (Sunni Islam); and Vatican City (Roman Catholicism). These are the centers of universal religions or their sub-branches that have historically expanded out from their birthplaces, eventually becoming main religions in other territories. Scholars of religion may disagree with our choices of centers. While we acknowledge controversies regarding centers of religions, we have made informed but pragmatic choices of locations that best serve the purpose of estimation and robust to alternative specifications.

[18] The advantages of our approach in using walking time/distance rather than the aerial distance, which has been typically used in the recent literature (Ashraf and Galor, 2013; Coşgel et al., 2018), is that walking mode of travel incorporates variations in topography and obstacles on the way. Moreover, by using walking time rather than walking distance we are able to incorporate differences in elevation between two points and other factors that depend on the direction of travel.

In calculating travel time across continents, we require routes to go through the following waypoints: Cairo, Egypt (Africa-Asia), Istanbul, Turkey (Asia-Europe), Phnom Penh, Cambodia (Asia-Oceania), Palos de la Frontera, Spain (Europe-Western Hemisphere), Santa María la Antigua del Darién, Columbia (Europe-South America) and Tenochtitlan, Mexico (Europe-Central and North America). The first three of these waypoints are based on Ramachandran et al. (2005), and the latter three are based on historical information regarding the starting location of European overseas exploration and the first sites of European conquest in the southern and central/northern sections of the Western Hemisphere (i.e., two sites because of the Darién Gap).

For information regarding the travel time and distance from these centers to each country, we used Python script to retrieve the data from Google server. Since Google currently does not provide data for routes through China, we used Bing to calculate the walking distance from China and in routes from Mongolia, Japan, Taiwan, and South and North Korea going through China. Whenever the route from a country to a religious center inevitably involved travel through a body of water, we used the average walking equivalent (5 km per hour) to incorporate this segment in our calculations. This questionable approximation is roughly consistent with the amount of time (about two months) that Columbus took to cross the Atlantic in his first voyage (about 6,500 km).

centers of trade and technology. Therefore, a territory's proximity to trade routes and technological frontiers might not only be correlated with civil conflicts through the direct relationship between conflicts and centers of trade and technology (Martin, et al., 2008), but it might also affect religious fragmentation, for example by facilitating the exposure of inhabitants to new religions, as was the case for the expansion of Islam in Asia (Michalopoulos, Naghavi, and Prarolo, 2018). To control for such confounders, we include in the analysis the distance to historical trade routes and the distance to regional technological frontiers in the years 1000 and 1500.

Historical income and long-term development may also have confounding effects on the relationship between religious structure and conflict. Considering population to be a suitable proxy for income in the Malthusian epoch, we include populations in the years 1000 and 1500 to account for historical income differences across territories. Further, to control for the differences across territories with respect to the deep-rooted determinants of long-run economic development, we include a state antiquity index, the time since Neolithic revolution, and the duration of human settlement in the baseline analysis.

Yet another historical variable included in the baseline analysis is historical conflict. The need for this inclusion arises from the suspicion that the presence of co-religious rulers in history might be related to conflicts. Recall from (3) that the presence of coreligionist rulers is a key component of the indices of historical religious structure, and it serves as a proxy for political favoritism. However, the likelihood that the ruler shared religion with the population of a territory could itself be endogenous to conflicts, because this could be the outcome of the coreligionist ruler's victory over a territorial conflict with another religious group. If the territory was persistently vulnerable to internal conflicts, the presence of coreligionist rulers could be correlated with conflict through channels other than favoritism. To mitigate this concern for endogeneity bias, we control for the incidence of historical territorial conflicts using data from Dincecco, et al. (2019), which is based on Brecke (1999).

5.3.3. Diversity Measures

As we discussed in Tables 2-4, researchers have proposed various measures of population diversity as factors affecting civil conflicts. In the baseline analysis we include representative measures of contemporary population diversity to account for the impact of this channel on civil conflict. Specifically, we include well-known indices of ethnic and religious fractionalization by Alesina, et al. (2003) and the indices of ethnolinguistic polarization proposed by Desmet, et al. (2012). The latter are based on a linguistic tree and reported at different levels of linguistic aggregation ranging from 1 to 15. We use the index of ethnolinguistic polarization constructed at level-6 of the linguistic tree, the level that has the highest degree of correlation with our index of historical religious fragmentation.

5.3.4 Other controls

In addition to the geographical, climatological, and historical variables, continent fixed effects, and diversity measures included in the baseline model, we consider various other variables which previous researchers have argued could have significant effects on civil conflicts. Although some of these variables may raise new endogeneity concerns, we nevertheless include them in additional specifications of the model to see whether their

inclusion alters our results significantly. Specifically, we include several variables concerning the colonial history of territories, political institutions, population, and income.

Colonial rule may influence civil conflict via political institutions (Wucherpfennig, et al., 2016). To account for the impact of colonial legacies on conflict we include dummy variables indicating whether a territory experienced colonial rule of the United Kingdom, France, or other powers (Arbatlı, et al., 2020). In addition, we include indicators for British and French legal origins of a territory to account for historical legacies that may not be picked up by the colonial rule (La Porta, et al., 1999). To capture the impact of current political institutions on civil conflict, we control for contemporary political regimes as the fraction of years under democracy and autocracy and average executive constraints during the period between 1960 and 2017(Marshal, et al., 2013; Arbatlı, et al., 2020). Finally, given that population and income are among the established predictors of civil conflict (Fearon and Laitin, 2003), we include the average population and average per capita income of a territory between 1960-2017 to control for their influence on civil conflict (World Bank Group, 2020; Arbatlı, et al., 2020).

6. OLS ANALYSIS OF INFLUENCES ON CIVIL CONFLICTS AT THE COUNTRY LEVEL

6.1 Regression Model

For regression analysis of the effect of historical religious fragmentation and favoritism on conflict at the country level, we used OLS to estimate the following equation:

$$CC_i = \beta_1 + \beta_2 HRS(1,1)_i + \beta_3 HRS(1,0)_i + \boldsymbol{X}_i' \boldsymbol{\beta}_4 + u_i \ , \qquad (4)$$

where CC_i is the average (log-transformed) number of new civil conflict eruptions per year in country *i* during the period between 1960 and 2017, and $\boldsymbol{X}_i'$ is the vector of confounding factors discussed above[19]. $HRS(1,1)$ and $HRS(1,0)$ are the key explanatory variables of interest as defined in (3); namely the indices of historical religious fragmentation with and without favoritism by coreligionists rulers (with T=1960 and ρ = 0.001, as defined above). u_i represents the error term corrected for heteroskedasticity.

In this specification, the omitted categories are $HRS(0,1)$ and $HRS(0,0)$; namely the cases of historical religious uniformity, with and without coreligionist rulers. To elaborate, given our interest in the impact of political favoritism, we do not further differentiate between the two subcases in the reference category according to whether the ruler did or did not share religion with the population because in such a religiously uniform territory there would be no basis for favoritism that could result in accumulated grievances and inequalities. The coefficients of $HRS(1,1)$ and $HRS(1,0)$ will thus show the differential effects the two types of religious fragmentation, with or without coreligionist rulers, relative to the case of religious uniformity, the joint omitted category.

6.2 Results

The results of the OLS analysis reported in Table 5 clearly support our hypotheses regarding the significantly greater likelihood of new conflicts arising in today's societies

[19] We follow the usual estimation procedure of adding one to the count before log-transforming to retain observations for countries with no recorded new conflicts. See, for example, Arbatlı et al. (2020).

that historically experienced not just religious fragmentation but rulers who shared religion with one of the groups. The results reported in different columns correspond to the inclusion of various combinations of confounding factors discussed above. Because of space constraints, Table 5 simply marks the broad categories of additional controls included in each column. We report the full results with individual variables in Appendix A.

The coefficient of "*HRS*(1, 1): Historical religious fragmentation with coreligionist ruler" is positive and highly significant (at the 1 percent level) in all specifications, indicating a robust relationship. The first column shows the results of unconditioned regression with only the two key indices. The estimated coefficient of *HRS*(1, 1) indicates that a move from the 10th to the 90th percentile of the cross-country distribution of this variable is associated with an increase of 0.033 new civil conflict outbreaks per year. When considered in relation to the sample mean of 0.022 and the standard deviation of 0.031, the magnitude of this effect is economically highly significant, corresponding to 106 percent of a standard deviation in conflict frequency across countries.

As we progressively include additional sets of controls in columns 2-6, the coefficient of *HRS*(1, 1) falls somewhat but remains positive and highly significant. Given the endogeneity concerns that arise with the controls included in the last three columns, it may be more appropriate to consider Column 3 as the baseline analysis for our discussion here and for the robustness checks reported in Appendix B. The estimated coefficient of *HRS*(1, 1) in this column is 0.032, which indicates that a move from the 10th to the 90th percentile of this variable would result in an increase of 0.025 additional conflict outbreaks per year, corresponding to 81 percent of a standard deviation in conflict frequency, a sizable economic significance.

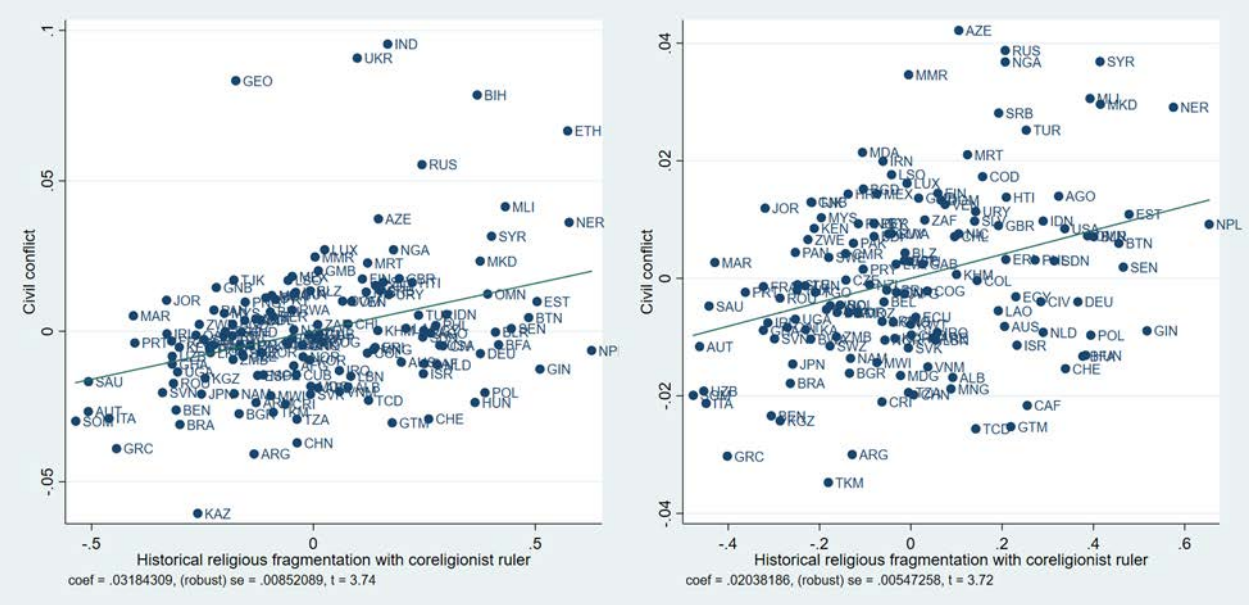
Table 5
The Impact of Historical Religious Fragmentation and Favoritism on Civil Conflict

VARIABLES	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
HRS(1, 1): Historical religious fragmentation with coreligionist ruler	0.042***	0.033***	0.032***	0.031***	0.034***	0.029***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)
HRS(1, 0): Historical religious fragmentation with non-coreligionist ruler	0.012	0.009	0.014	0.015	0.004	-0.012
	(0.013)	(0.014)	(0.016)	(0.016)	(0.017)	(0.017)
Observations	150	150	150	150	150	147
R-squared	0.192	0.442	0.475	0.491	0.518	0.601
Geographic and climatic controls		x	x	X	x	x
Continent FE		x	x	X	x	x
Historical controls			x	X	x	x
Diversity measures				X	x	x
Colonial history, legal origin					x	x
Current pop, GDP, Institutions						x
R^2 DECOMPOSITION (%)						
HRS (1, .)		32.865	24.466	22.860	22.029	14.054
Geographic and climatic controls		51.210	34.220	32.177	29.845	23.259
Continent FE		15.925	9.223	8.438	8.531	7.687
Historical controls			32.091	31.433	28.873	23.445
Diversity measures				5.093	4.655	3.135
Colonial history, legal origin					6.067	5.601
Current pop, GDP, Institutions						22.819

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The coefficient of HRS(1, 1) remains about the same magnitude in Column 4 after we include various measures of diversity discussed above. This is consistent with the results of unconditioned "horserace regressions" reported in Table 4, and shows again that our key variable reveals a distinct feature of population diversity and political favoritism that is not captured by the measures previously used in the literature. The coefficient of HRS(1,1) changes somewhat in the last two columns with the inclusion of additional confounders concerning colonial history, legal origins, and contemporary economic indicators, but the significance of the effect of this variable remains high.

Figure 3
The partial effect of historical religious fragmentation with coreligionist ruler on new civil conflicts



Note: The figures show the scatterplot and partial effect of historical religious fragmentation with coreligionist ruler (*HRS*(1,1)) on civil conflict for the full sample (left) and for the sample excluding outliers Georgia, Ukraine, India, Bosnia, Ethiopia, and Kazakhstan (right).

Figure 3 shows the scatter plots of the partial effect of historical religious fragmentation with coreligionist rulers on the average number of new civil conflict eruptions, based on the baseline specification reported in Column 3. It depicts the individual location of specific countries in this relationship and the positive and highly significant cross-country relationship between our key variable and new conflicts.

The results contrast sharply between our two key indices. The coefficient of "HRS(1, 0): Historical religious fragmentation with non-coreligionist ruler" is substantially smaller than that of HRS(1, 1) and statistically insignificant in all columns. The estimated coefficient of HRS (1,0) in the baseline model (Column 3) indicates that a move from the 10th to the 90th percentile of the cross-country distribution of *HRS*(1, 0) is associated with an increase in conflict frequency by 0.0031. This corresponds to only 10 percent of a standard deviation increase in conflict frequency across countries, a negligible economic significance. The insignificance of the effect of *HRS*(1, 0) on civil conflicts supports our contention that the real effect was instead through the presence of coreligionist rulers who could capitalize on this fragmentation. Whereas previous studies typically considered measures of religious fragmentation to investigate the reasons for the association between religion and conflict, our results show that population fragmentation is only a part of the story. Specifically, it is a necessary but not a sufficient condition.

The bottom panel of Table 5 shows the decomposition of the overall R-squared into different categories of explanatory variables included in each model. Decomposition into partial R-squareds provides a measure to assess the explanatory power of historical religious structure in explaining modern conflicts, relative to other determinants.[20] As seen in the third column of the table, our key variables explain about one-third of the variation in civil conflicts relative to continent fixed-effects and geographic and climatic controls. The percentage falls as other variables are included in Columns 3-6, as expected. In the full model (Column 6), historical religious structure accounts for about 14 percent of the explained variation in modern conflicts.

6.3 Robustness Checks at the Country Level

To check the robustness of our results to alternative specifications, we run various tests as reported in Appendix B. At the country level, we first determine whether the basic argument regarding the effect of shared religion with rulers in historically fragmented societies applies to other definitions of conflict as the dependent variable. Using the same dataset, we rerun the analysis with different measures of conflict that consider not just the onset frequency of conflict but the intensity and subcategories of civil conflict; and likewise, not just conflict in total during a long time-period but during shorter-term periods such as in the 5-year incidence and 1-year onset of civil conflicts. For a related test of how our results vary across types of conflict, we run the analysis by differentiating between inter-religious and nonreligious conflict. In addition, we exclude the new world and MENA countries from the dataset to see whether the exclusion of certain subsets of countries alters the results. Likewise, we include religion shares (e.g., percent Muslim) and representative contemporary measures of diversity. Finally, we check for robustness to

[20] For examples of similar decomposition analyses in the related literature see Ashraf, et al (2021: Table 22.2) and Henderson, et al (2018: Table II). We used the Stata command called "rego" for the decomposition.

selection on unobservables and test for autocorrelation in disturbance terms to account for spatial dependence.

7. FRAGMENTATION, FAVORITISM, AND CONFLICT AT THE ETHNICITY LEVEL

In this section, we examine the effect of historical religious fragmentation and political favoritism on civil conflicts at the ethnicity level. The need for analysis at the subnational level arises because of endogeneity concerns regarding the territorial borders of today's countries, which are likely affected by both historical conflicts and religious fragmentation and favoritism. To address these concerns, we shift the unit of analysis to the subnational level by exploiting variations across ethno-religious groups, a common strategy among recent empirical papers in the "deep roots" literature. [21]

We merge available data at the ethnicity level with information from our own Historical Polities Dataset to generate new indices of historical ethnoreligious structure for the analysis, as detailed below. These indices allow us to explore variations among ethnic groups regarding the extent to which their religions were part of a fragmented society in the past and were included in (or excluded from) political power through shared religion with rulers. By including geographic and climatic variables, group size, country fixed effects and racial origin fixed effects in the analysis, we examine how historical ethnoreligious exclusion from power affected current civil conflicts.

Our analysis helps to disentangle the effects of religious and ethnic differences on conflict. The overlaps between the concepts of religion and ethnicity have presented serious challenges to the literature on the analysis of conflict at the subnational level (Fox, 2002: 25-29). We contribute to this literature by focusing on historical favoritism along religious lines. In our approach to modern conflicts in the Middle East, for example, our focus is placed more on religious differences between the Sunni and Shia Arabs, as was the case during recent sectarian conflicts in Iraq and Syria, than on ethnic differences between Arabs and Persians, or other ethnic groups. In addition, we focus more on the legacy effects of favoritism by past rulers than on the immediate effects of discriminatory practices of today's politicians. We believe that our approach provides a fresh perspective and useful structure to the analysis of modern conflicts at the ethnic group level.

In addition to mitigating potential endogeneity concerns with national borders, running dual analysis at the national and sub-national levels offers the extra benefit of opening the black box of political favoritism. In cases of religious fragmentation and political favoritism by coreligionist rulers in a territory, we are able to disentangle the effects on conflict of benefitting and suffering from ethnoreligious favoritism at the subnational level.[22] Whereas at the national level fragmentation and shared religion

[21] Recent research has shown various forms of endogeneity between nation states and political economy concerns, such as population diversity, trade regimes, political system, civil conflicts, and public good provision. See, for example, Alesina, Giuliano, and Reich, 2019; Alesina, Reich, and Riboni, 2017; Alesina and Spolaore, 2003; Alesina, Spolaore, Wacziarg, 2000; Desmet et al., 2011.

[22] See Arbatlı, et al., (2020: 729-30) for a discussion of the benefits of dual analysis at the national and ethnic-homeland levels in studying the effect of genetic diversity on conflict. In addition to mitigating potential endogeneity concerns with national borders, this approach makes it possible to explore the effects of genetic diversity at different scales, disentangle the impacts within and across ethnic groups, and reduce potential concerns regarding the relationship between conflicts and population movements.

broadly planted seeds of conflict via grievance and inequality, we can now further specify which group has been historically excluded from power and may carry the seeds of today's conflicts.

7.1 Ethnicity-level Data

To address the endogeneity problem related to the use of nations as the unit of analysis, we shift the unit to the subnational level by using ethnic group level data from the recent Ethnic Power Relations (EPR) dataset. This dataset "provides data on ethnic groups' access to state power, their settlement patterns, links to rebel organizations, transborder ethnic kin relations, and intraethnic cleavages" (Vogt, et al., 2015: 1327). The core EPR dataset (version 2019) identifies all "politically relevant ethnic groups" in every country during the period between 1946 and 2017 and provides information regarding the degree to which their representatives held executive-level state power. In addition, the dataset links these groups to conflicts inventoried in UCDP/PRIO Armed Conflict Dataset, making it feasible to analyze influences on conflict at the ethnicity level.

Given our interest in the relationship between religion and civil conflict, the new "Ethnic Dimensions" (EPR-ED) version of the EPR dataset is particularly useful because it includes information regarding the religious composition of ethnic groups (Bormann, et al., 2017). For each ethnic group included in the dataset, the EPR-ED data identifies up to three of the largest religious sub-groups and provides their relative sizes. This information allows us to construct our key indices at the ethnicity level.

To merge the EPR dataset with our own HPD, we assume that the transmission of the effect of historical religious fragmentation and political favoritism to today's conflicts at the ethnic group level happened via religion, the focus of our analysis. This is because unfortunately we do not have comprehensive information regarding the religions of all ethnic groups in history. The EPR dataset shows the religious composition of ethnic groups only as measured recently, subsequent to several major waves of religious conversion that took place during our time period. Likewise, for each year during this period, our own HPD shows only whether a certain religion had adherents in a territory, not whether a certain ethnic group adhered to this religion in that year. Therefore, the assumption that historical transmission of the legacy effect of historical fragmentation and political favoritism happened via religion (i.e., at the point of conversion, if any) is required for the construction of indices of ethnoreligious fragmentation and favoritism, detailed below, by merging the two datasets with religion as the common link.

7.2 Measuring historical ethnoreligious fragmentation and favoritism

To generate appropriate indices for empirical analysis at the subnational level, we merge information from EPR with our own HPD. Although HPD does not include information for each territory at the ethnicity level, we are able to link the two datasets via religion. In cases of multiple religions in an ethnic group, we link to HPD through the majority religion of the group because EPR includes conflict data at the ethnicity level, not individually for each of the identified religious subgroups.

We construct indices of historical religious structure at the subnational level by applying the formula stated in (3) to ethnoreligious groups. In this context, $G(f,s)$ may be defined as a dummy variable that equals one for specified values of f and s at the ethnicity level, and zero otherwise. For example, $G^t(1,1)$ will equal one for an ethnic group in a

certain territory if their majority religion was represented in a religiously fragmented population in the territory (f=1) and the ruler shared the same religion as the religion of the ethnic group (s=1) at time period t. Likewise, $G^t(1,0)$ would equal one if the religion was part of religious fragmentation in a territory (f=1) but the ruler's religion differed from the religion of the ethnoreligious group (s=0) at that time period.

To differentiate between indices at the national and subnational levels, we will generally refer to the corresponding indices at the subnational level as "Historical *Ethnoreligious* Structure" (*HES*). The key indices of interest for our analysis at the subnational level are those that correspond to the two dummy variables discussed above, namely $G^t(1,1)$ and $G^t(1,0)$. The values of resulting indices, *HES*(1,1) and *HES*(1,0) have similar interpretations to those at the national level. Specifically, *HES*(1,1) is the weighted fraction of years during which the religion of the ethnic group was represented in religious fragmentation (f=1), and the ruler had the same religion as the religion of the group. Consistent with the labeling of our measures at the country level, we will refer to the resulting index, *HES*(1,1), as "Historical ethnoreligious fragmentation with coreligionist rulers". In this case, our theoretical argument would imply that the ruler would derive legitimacy from the adherents of this religion and tend to favor them in the allocation of resources and public goods. Combining our interpretation with the main focus of the EPR data on power relations, *HES*(1,1) can be interpreted as an indicator of favoritism and inclusion in power.

HES(1,0) would similarly equal the weighted fraction of years with religion of the group as part of religious fragmentation in a territory and during which the ruler's religion differed from the religion of the group. The religious difference in this case would imply that the ruler would tend to disfavor this group and exclude it from power. We will therefore refer to this index as "Historical ethnoreligious fragmentation with non-coreligionist rulers," and interpret it as an indicator of nonfavoritism and exclusion from power. Once again, given our interest in the effects of religious fragmentation and favoritism, we will put greater emphasis on these two categories in our regression analysis by including them in the estimation model and lumping the other two possibilities (i.e., the cases of religious uniformity with or without shared religion with the ruler) into a single group as the reference category. Appendix D shows the descriptive statistics of these indices.

7.3 Empirical results of ethnicity level analysis

For regression analysis of the effect of historical religious favoritism on conflict at the ethnicity level, we used OLS to estimate the following equation:

$$CC_i = \beta_1 + \beta_2 HES(1,1)_i + \beta_3 HES(1,0)_i + \boldsymbol{Z}_i' \boldsymbol{\beta}_4 + u_i \ , \qquad (5)$$

where CC_i is the average (log-transformed) number of new civil conflict eruptions per year that ethnic group i participated during the period between 1960 and 2017, and *HES*(1,1) and *HES*(1,0) are the key explanatory variables of interest defined above; namely the indices of "Historical ethnoreligious fragmentation with coreligionist rulers" and "Historical ethnoreligious fragmentation with non-coreligionist rulers" (with T=1960 and ρ = 0.001). In this specification, the omitted categories are *HES*(0,1) and *HES*(0,0), which correspond to the cases of historical religious uniformity in the majority religion of the

ethnic group, with and without coreligionist rulers. As before, given our interest in the impact of political favoritism, we do not further differentiate between the two subcases in the reference category according to whether the ruler did or did not share religion with the population because in such a religiously uniform territory there would be no basis for favoritism and exclusion from power that could result in accumulated grievances and inequalities. The coefficients of *HES*(1,1) and *HES*(1,0) thus show the differential effects of the two types of religious fragmentation, with or without coreligionist rulers, relative to the case of religious uniformity, the joint omitted category. They represent the effects of political favoritism/inclusion due to shared religion versus nonfavoritism/exclusion,

The control variables, $\boldsymbol{Z_i'}$, consist of confounding factors for which we have information available at the ethnicity level. Similar to the analysis at the country level, we group these variables into four categories defined at the ethnic group level. The first category consists of various geographic and climatic variables. Specifically, we include terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, distance to the nearest waterway, diurnal temperature range, volatility of temperature, and volatility of precipitation.[23] In the second category, we consider the regional origins of the group's race, which are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, and Sub-Saharan Africa. Based on "a close reading of secondary sources from history, sociology, and political science," the regional origins of race variables are available from the "Ethnic Dimensions" version of the EPR dataset (Bormann, 2021: 3). The third category consists of country fixed effects, included to control for the effects of unobserved differences across territories. Finally, we include the relative size of the ethnic group, which researchers have found to have a positive and significant effect on civil conflict (Cederman, et al., 2013: 73).

Table 6
The Impact of Historical Ethnoreligious Fragmentation and Favoritism on Civil Conflict

VARIABLES	(1)	(2)	(3)	(4)	(5)
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	0.0050***	0.0047***	0.0045**	0.0050**	0.0048**
	(0.0017)	(0.0017)	(0.0018)	(0.0022)	(0.0022)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	0.0056***	0.0052**	0.0053**	-0.0024	-0.0021
	(0.0020)	(0.0021)	(0.0021)	(0.0030)	(0.0030)
Observations	659	659	659	659	659
R-squared	0.022	0.043	0.063	0.340	0.342
Geographic and climatic controls		x	X	x	x
Regional origins of race FE			X	x	x
Country FE				x	x
Group size					x
R^2 decomposition (%)					

[23] Using GeoEPR from Wucherpfennig et. al. (2011) to identify the homelands of ethnic groups, we extracted terrain ruggedness data from Nunn and Puga (2012), mean and range of elevation data from National Oceanic and Atmospheric Administration (NOAA) and U.S. National Geophysical Data Center. Terrain Base, diurnal temperature range, volatility of temperature, and volatility of precipitation are from Fick and Hijmans (2017), mean and range of soil suitability data are from Ramankutty et. al. (2011), and mines data are from U.S. Geological Survey, 2005, Mineral Resources Data System: U.S. Geological Survey, Reston, Virginia.

HES(1, .)	47.27	31.82	4.35	4.22
Geographic and climatic controls	52.73	34.26	5.25	5.53
Regional origins of race FE		33.92	6.20	6.18
Country FE			84.20	83.19
Group size				0.88

Notes: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, distance to the nearest waterway, diurnal temperature range, volatility of temperature and volatility of precipitation. Regional origins of race fixed effects are binary variables from the EPR-ED dataset for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 6 shows the results of OLS analysis of historical ethnoreligious structure on civil conflicts at the ethnicity level. Consistent with Table 5, the estimates reported in different columns correspond to incremental inclusion of control variables. Whereas column 1 shows the unconditioned effects of our two key variables, columns 2-5 include geographic and climatic controls, regional origins of race fixed effects, country fixed effects, and group size.

The coefficient of "*HES*(1,0): Historical ethnoreligious fragmentation with non-coreligionist ruler" remains positive and significant at conventional levels across all columns, with about the same magnitude, as additional controls are included in the analysis. Specifically, the coefficient of *HES*(1,0) in column 3 indicates that a move from the 10th to the 90th percentile of the distribution of this variable is associated with an increase in conflict frequency by 0.0048 new civil conflict outbreaks per year, corresponding to 31.7 percent of a standard deviation across ethnic groups in the frequency of new civil conflict eruptions.

In Appendix C.iii we additionally include political exclusion in the analysis to disentangle the effects of religious and ethnic exclusion. As seen in Table C3, this variable has a positive effect on civil conflicts, as expected. It is reassuring that our main results are robust to accounting for political exclusion in the analysis.

Interestingly, the coefficient of "*HES*(1,1): Historical ethnoreligious fragmentation with coreligionist ruler" is also positive and significant in the first three columns, but the coefficient becomes negative with disappearing significance as soon as country fixed effects are introduced as additional controls. This indicates that *HES*(1,1) picked up the effect of country level fragmentation in the first three columns, but it lost its explanatory power for intra-country differences once country fixed effects were included. The rise in the coefficient of *HES*(1,0) between columns (3) and (4) is consistent with this shift in explanatory power. Overall, these results provide strong support for our argument that ethnic groups with historically *disfavored* religions by non-coreligionist rulers are more likely than other groups to participate in contemporary new civil conflicts.

Figure 4

The partial effect of historical ethnoreligious fragmentation with non-coreligionist rulers on civil conflict (binned scatter plot)

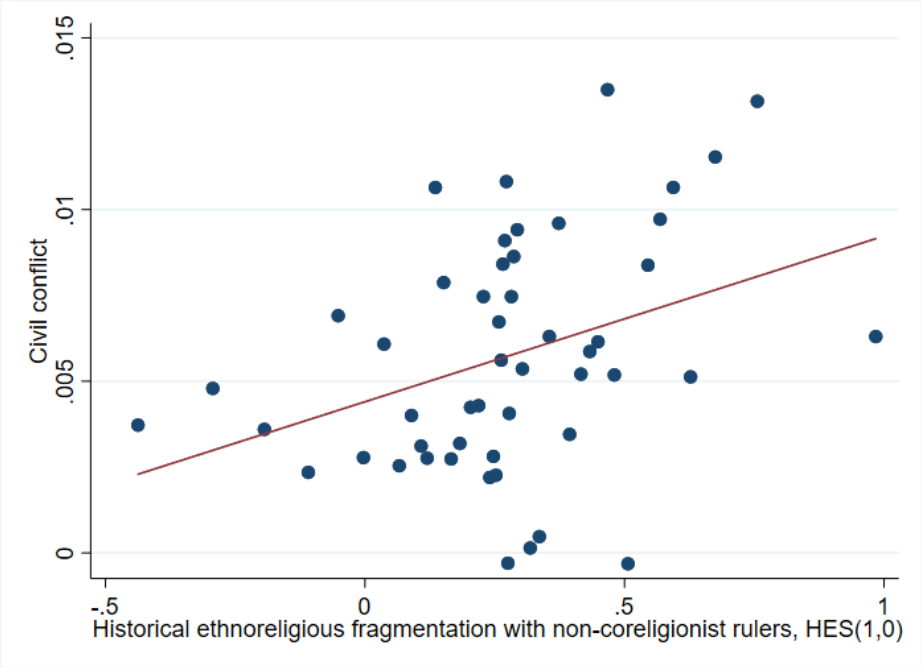


Figure 4 shows the scatter plot of the partial effect of historical ethnoreligious fragmentation with non-coreligionist rulers on the average number of new civil conflict eruptions, based on the specification reported in Column 5 of Table 6.

7.4 Complementarity between the results of country and ethnic group level analysis

The results of analysis at the country and ethnic group levels complement each other in determining how historical favoritism affected current conflicts. At first glance, there may appear to be a discrepancy between the main findings at two levels. Whereas at the county level the significant correlate of contemporary civil conflicts is historical religious fragmentation with *co*religionist rulers, at the subnational level the robust correlate switches to fragmentation with *non-co*religionist rulers. This does not indicate a discrepancy, however. Country level results simply show the importance of having a shared religion as the historical setting in which past rulers could engage in political and economic favoritism along religious lines, which then produce current civil conflicts. Ethnic level results extend this finding further by specifying the group from which the legacy effect would originate—namely, the non-coreligionist individuals who were historically excluded from power and hence victimized by this favoritism.

To elaborate, recall that at the country level our results indicated that conflicts are borne out of circumstances in which a ruler shares the religion of one of the multiple religious groups. As we have hypothesized, this creates a situation in which the ruler will

possibly favor the coreligionist group by granting its members greater access to economic rights and opportunities. It is this favoritism, rather than religious fragmentation per se, that engenders grievances that can accumulate overtime, potentially spawning conflicts at the national level. The significance of *HRS*(1,1) in Table 5 captures this effect.

When we shift the unit of analysis from the country level to ethnic groups, we see more clearly the source of the legacy effect. In Table 6, the consistent significance of *HES*(1,0) and declining significance of *HES*(1,1) in models that include country fixed effects indicate that the legacy effect originates from *disfavored* groups. The greater is the fraction of years in which an ethnoreligious group was disfavored (i.e., did not share the ruler's religion) in a territory, the greater is the likelihood of a conflict involving that group today.

To provide further support for the complementarity between the results of country and ethnic group level analysis, we run a robustness check by changing the reference category of our main variables by including in the analysis the case of historical ethnoreligious uniformity with non-coreligionist rulers, which allows us to examine the effect of ethnic discrimination by non-coreligionist rulers in not just fragmented societies but in homogenous ones as well. As seen in Appendix C (Table C5), the coefficients of our key variables remain about the same.

7.5 Robustness Checks at the Subnational Level

To check the robustness of our results to alternative specifications at the ethnicity level, we consider similar concerns as those at the country level, though a smaller number due to data limitations. Specifically, we consider different types of conflict by running the same analysis separately for governmental and territorial conflicts. To check sensitivity to group size, we restrict the sample to subsets of the dataset by excluding smaller groups from analysis. In addition, we include political exclusion as a variable in the analysis in an attempt to disentangle the effects of religious and ethnic exclusion. Furthermore, we run the same analysis by excluding the new world from the sample to examine the sensitivity of our results to systematic variations in the historical experiences of ethnic groups across geographic regions of the world. Finally, we include in the analysis an additional measure for each ethnic group that captures the degree of the group's historical exposure to non-coreligionist rulers; specifically the fraction of time under rule by a non-coreligionist leader in ethnoreligiously uniform societies. The results of robustness tests at the ethnicity level are reported in Appendix C. The tests show that our baseline results are highly robust to these alternative ways of specifying the estimation model.

8. CHANNELS OF TRANSMISSION

We now turn to an analysis of the proximate mechanisms that transmitted the effect of historical religious fragmentation and political favoritism by coreligionist rulers to the onset of recent civil conflicts. The next two subsections show the results of the analysis separately at the national and subnational levels. At both levels, we explore potential mediating channels that capture both the greed and grievance aspects of transmission.

Among the various potential mediating channels suggested in the literature, we focus on the roles of economic inequality and political grievance, based on data availability and the theoretical argument presented earlier. Whereas we would expect political

grievances to operate mostly through the grievance channel, economic inequality could have additionally created incentives for the groups to engage in conflict due to greed. Historical favoritism likely resulted in the overallocation of resources and rent-seeking opportunities to coreligionist groups, as predicted by our model, thereby generating wealth differentials between religious groups in the society. The differential could then have generated persistent incentives for the groups to engage in conflicts due to both grievances (arising from the initial political favoritism and wealth differential) and greed (arising from the desire to claim a greater share of resources, regardless of initial distribution).

For an empirical implementation of the way economic inequality and political grievances served as mediating channels, we need to include these variables in our basic analysis. Specifically, first we need to check whether our key historical explanatory variables have significant effects on the levels of inequality and grievances in modern societies and whether inequality and grievances likewise have significant effects on civil conflicts. The results of these analyses would establish the direction and significance of the two essential links in the channels of transmission. If the results confirm the posited relationships, we can proceed to the determination of the magnitude of the transmission through inequality and grievances by estimating how the inclusion of these variables in the baseline analysis would change the coefficients of the effects of historical religious fragmentation and favoritism on civil conflicts.

In addition to economic inequality and political grievances, mistrust – or lack of social cohesion – might have served as a mediating channel (Arbatlı et al., 2020). Unfortunately, data limitations prevent us from conducting a complete empirical analysis of whether the effect of historical religious fragmentation on civil conflicts was mediated by mistrust. Nevertheless, we have examined this question based on available, though noisy and limited, data at the country and ethnic group level, as seen in Appendix E. The results show that historical religious fragmentation with coreligionist rulers had no significant effect on trust ("generalized interpersonal trust," from the World Values Survey) at the country level. This may be because generalized trust is a noisy measure of intergroup trust for this analysis. In contrast, at the ethnic group level historical religious fragmentation with noncoreligionist rulers had a negative and significant effect on trust across ethnic groups in Africa, as expected. Detailed results of these analyses are available in Tables E1 and E2.

8.1 Transmission at the country level

We first explore the potential mediating effects of economic inequality and political grievances at the country level. The data for this analysis come from two different sources. Regarding economic inequality, information from the satellite images of nighttime luminosity has recently been commonly used as a standard proxy for economic activity and income inequality because of various shortcomings of traditional sources for the accurate measurement of local output in many countries. Therefore, we use the "Overall spatial inequality Index" of (Alesina, et al., 2016), which "is based on aggregating (via the Gini coefficient formula) luminosity per capita across roughly equally-sized pixels in each country." Similarly, for an appropriate country-level indicator of political grievances, we use the "Group Grievances" index developed by the Fund for Peace, which "focuses on divisions and schisms between different groups in society … and their role in access to

services or resources, and inclusion in the political process."[24] "Overall spatial inequality" (ranging from 0 to 1) and "Group grievances" (ranging from 0 to 10) are indices with higher values corresponding to greater levels of inequality and grievance. If the index values were available for multiple years, we took the simple average of all available years within the period between 1960 and 2017 for consistency with our measure of civil conflicts.

Table 7
Mediators of Conflict at the Country Level

VARIABLES	(1) Conflict (baseline)	(2) **Economic Inequality**	(3) Conflict	(4) Conflict	(5) **Political Grievance**	(6) Conflict	(7) Conflict	(8) Conflict
HRS(1, 1): Historical religious fragmentation with coreligionist ruler	0.032***	0.134***		0.030***	1.261***		0.027***	0.026***
	(0.009)	(0.048)		(0.009)	(0.475)		(0.009)	(0.009)
HRS(1, 0): Historical religious fragmentation with non-coreligionist ruler	0.016	-0.124		0.018	-0.249		0.017	0.018
	(0.016)	(0.096)		(0.016)	(0.923)		(0.016)	(0.016)
Economic inequality			0.025*	0.013				0.008
			(0.015)	(0.015)				(0.014)
Political grievance						0.006***	0.004**	0.004**
						(0.002)	(0.002)	(0.002)
Observations	144	144	144	144	144	144	144	144
R-squared	0.458	0.705	0.393	0.462	0.711	0.439	0.492	0.493
Geographic and climatic controls	x	x	x	x	x	x	x	x
Continent FE	x	x	x	x	x	x	x	x
Historical controls	x	x	x	x	x	x	x	x

Note: The dependent variables are as specified in the top row. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7 shows the results of regression analyses of the way economic inequality and political grievances transmitted the effect of historical religious fragmentation and favoritism to recent new civil conflicts at the country level. All columns include the same control variables as in the baseline analysis reported in Table 5; namely continent fixed effects, geographic and climatological factors, and historical variables. The first column shows the coefficients of the baseline analysis, copied here from the third column of Table 5 for comparison. Columns 2-4 show the analysis of the mediation effect through inequality, and columns likewise 5-7 show the analysis regarding grievances.

[24] The "Group grievance indicator" in part of the "Fragile States Index". For methodology and other details, see fragilestatesindex.org.

In columns 2 and 5, we regress economic inequality and political grievances on our key variables of interest. As seen in the Table, the coefficient of "historical religious fragmentation with coreligionist rulers" is positive and highly significant in both columns. This finding indicates that societies with greater historical fragmentation and favoritism accumulated higher levels of contemporary economic inequalities and political grievances, as hypothesized. Columns 3 and 6 show the other component of the mediation effects of economic inequality and political grievances; namely the individual effects of these variables on conflict. The effects are positive and highly significant, confirming the posited relationship.

The remaining question, examined in columns 4, 7, and 8 of Table 7, is how the inclusion of economic inequality and political grievances in the analysis of the determinants of civil conflict would alter our previous baseline results. If these factors served as channels of transmission as hypothesized, their inclusion in the analysis would be expected to reduce the effect of historical religious fragmentation with coreligionist rulers, our key variable, on civil conflicts. The coefficient indeed drops significantly, as hypothesized. Whereas the coefficient of this variable is 0.32 in the baseline equation, it falls sharply to 0.26 in the last column once both mechanisms are included in the analysis. Interestingly, the fall is greater for grievances (column 7) than for inequality (column 3). Overall, the results clearly support our contention that economic inequality and political grievances served as channels of transmission for the effect of historical religious fragmentation with coreligionist rulers on today's civil conflicts.

8.2 Transmission at the subnational level

At the subnational level, we run parallel analyses based on ethnic group level data from two different sources. Regarding economic inequality, we focus on horizontal inequality among ethnic groups, using data introduced by Cederman, et al. (2015). Combining data on global economic activity from Nordhaus (2006) with GeoEPR data on the settlement areas of politically relevant ethnic groups, Cederman, et al. (2015) estimate the per capita GDP of each group. They compare the group GDP per capita with the average value for the entire country to investigate whether groups with per capita incomes far from the country average are more likely than those closer to the average to engage in conflict. Their results show that poorer groups were more likely to experience conflict than those closer to the national average during the period between 1991 and 2009, likely because such groups perceive themselves to be systematically disadvantaged and underserved by the country's resources.

Since the reasoning behind the asymmetric effect that Cederman, et al. (2015) have found between the richer and poorer groups is directly applicable to our case, we use their measure, called the "low-ratio," in our analysis of the mediating effects of inequality. Formally, the "low-ratio" indicator of economic inequality equals the ratio of average per capita income of all groups in the country divided by per capita income of the ethnic group for groups whose income is *lower* than the country average, and 1 otherwise. As an additional advantage, the ethnic groups included in the Cederman, et al. (2015) sample are mapped to the EPR dataset so that we can use the same measure of conflict for our mediation analysis, as we did in Table 6.

For a similar analysis of the mediating effects of political grievances at the ethnic group level, we use data from the All Minorities at Risk (AMAR) Phase 1 Sample (Birnir, et

al., 2018). The AMAR sample is the product of a research project that "monitors and analyzes the status and conflicts of politically-active communal groups in countries with a current population of at least 500,000." It has a panel structure and covers the period between 2004-2006 in the latest phase. Importantly, the dataset includes information regarding the plurality religion of each ethnic group, which we use to merge with our own HPD to generate group-level measures of historical ethnoreligious structure. In addition, the AMAR dataset includes a suitable index of political grievances, ranging between 0 and 3, based on "the highest level of grievance expressed by group representatives." For each ethnic group, we averaged this index across the time span of the data to generate the dependent variable of our regression analysis.

Because of discrepancies between of the AMAR and EPR samples in temporal and group coverages, we cannot use the EPR measure of civil conflict for our analysis of the mediating effects of political grievances. In addition, the AMAR dataset does not include information regarding the geographic and climatic characteristics of group locations or the regional origins of their race, variables that we used as controls in our baseline analysis in Table 6. The AMAR dataset nevertheless includes its own indicator of each group's involvement in civil conflicts, an index called "rebellion," which we can use for mediation analysis. Similar to the EPR measure of civil conflict, the values of the "rebellion" index rise corresponding to higher levels of conflict. Specifically, it categorizes conflict into several groups depending on their severity, ranging from no conflict (0) to civil war (7).

Table 8
Mediators of Conflict at the Ethnic Group Level

	Economic Inequality (EPR sample)				**Political Grievance (AMAR sample)**			
VARIABLES	(1) Conflict (Baseline)	(2) Economic Inequality	(3) Conflict	(4) Conflict	(5) Conflict (baseline)	(6) Political Grievance	(7) Conflict	(8) Conflict
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	0.00449*	0.07519*		0.00421*	0.9656*	1.1068**		0.4655
	(0.00240)	(0.04243)		(0.00242)	(0.5422)	(0.4820)		(0.4786)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	-0.00248	-0.12033**		-0.00204	-0.3880	0.3344		-0.5391
	(0.00313)	(0.05432)		(0.00307)	(0.5829)	(0.4762)		(0.5170)
Economic Inequality			0.00486*	0.00371				
			(0.00295)	(0.00292)				
Political Grievance							0.4804***	0.4518***
							(0.1177)	(0.1154)
Observations	583	583	583	583	220	220	220	220
R-squared	0.363	0.477	0.358	0.366	0.321	0.395	0.381	0.396
Geographic and climatic controls	x	x	x	x				
Regional origins of race FE	x	x	x	x				
Country FE	x	x	x	x	x	x	x	x

Notes: The dependent variables are as specified in the top row. Geographic and climatic controls include

terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, distance to the nearest waterway, diurnal temperature range, volatility of temperature and volatility of precipitation. Regional origins of race fixed effects are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table 8 shows the results of our analysis of the mediating effects of economic inequality and political grievances in the relationship between historical ethnoreligious structure and civil conflicts. Similar to the analysis of transmission channels at the country level, we examine the inclusion of economic inequality and political grievances in the analysis separately. Since the set of ethnic groups and the measures of conflict included in the analysis are different between the EPR and AMAR samples, we first estimate the corresponding baselines for the effects of our key variables. As seen in columns 1 and 5, the coefficients of historical ethnoreligious fragmentation with non-coreligionist rulers are positive and significant, consistent with the baseline results obtained in Table 6.

Columns 2-4 and 5-8 show the results of regression analyses of the way economic inequality and political grievances transmitted the effect of historical ethnoreligious fragmentation and favoritism to recent new civil conflicts at the ethnic group level. The coefficient of historical ethnoreligious fragmentation with non-coreligionist rulers is positive and significant at conventional levels in columns 2 and 6, indicating that our key variable had the posited effects on economic inequality and political grievances. Likewise, as seen in columns 3 and 7, these variables have positive and significant effects on civil conflicts, as hypothesized. Finally, the coefficient of historical ethnoreligious fragmentation with non-coreligionist rulers drops substantially in columns 4 and 8, as compared to columns 1 and 5. Similar to our results at the country level, the magnitude of the drop is much higher for political grievances than economic inequality. Overall, the results at the ethnic group level also support our argument that economic inequality and political grievances served as channels of transmission for the effect of historical ethnoreligious fragmentation and favoritism on today's civil conflicts.

We must be careful to acknowledge that our results regarding transmission channels are suggestive because of endogeneity concerns in the way civil conflicts are related to economic inequality and political grievances. In addition to the examined effects of these factors on civil conflicts, it could be the case that conflicts can themselves generate grievances and inequalities as influences going in the other direction. In that case, our estimates would fail to confirm conclusively that these proximate factors served as channels that mediated the reduced form association between historical favoritism and recent conflicts. In order to establish this claim conclusively, we would need to include in our analysis exogenous sources of variation for each of the hypothesized channels that are at least partly orthogonal to the variation in historical religious fragmentation and favoritism. In the absence of such variables, we offer our results as tentative and suggestive evidence on the transmission channels.

9. CONCLUSION

This paper studied the theoretical and empirical link between civil conflict and historical experience with shared religion with rulers in fragmented societies. We developed a political economy model in which the ruler's enactment of laws or allocation of

public expenditures potentially cause grievances and inequalities to emerge in a religiously segmented society. According to the model, differential treatment is most likely if the ruler shared religion with a segment of population in a fragmented society, a situation that can cause him to favor the coreligionist group over other(s) in public policy. The persistence of this situation over time can cause the disfavored groups to accumulate greed and grievances against the government and eventually impel them to resort to violence to seek redress or vengeance.

We tested the implications of the model by using data at both the national and subnational levels. At the national level, we used data on new civil conflicts as well as data on geographical, climatological, and historical characteristics of countries. In addition, we used a new dataset that contains information on the religious and political histories of each country since the year 1000. We specifically used this data to construct indices of historical religious fragmentation and favoritism, which then measured the deep roots of accumulated greed and grievances. Empirical results showed that the frequency of civil conflicts in the post-1960 period has been significantly higher in societies that have historically had greater incidence of situations in which the religion of the ruler was the same as one of the groups but different from others, as compared to situations of religious uniformity.

For analysis at the subnational level, we used ethnic group level data that includes information about the groups' access to state power, religious composition, and participation in civil conflicts. Merging this information with our own dataset, we generated indices of ethnoreligious fragmentation and favoritism. The results of OLS analysis showed that ethnic groups with majority religions that have been historically disfavored by non-coreligionist rulers are more likely to participate in new civil conflicts than other groups in historically uniform societies in religion. In addition to mitigating potential endogeneity concerns with national borders, the analysis at the ethnicity level reinforced our findings at the national level and allowed us to delve more deeply into the black box of the effect of political favoritism on civil conflicts.

To examine the proximate mechanisms that transmitted the effect of historical fragmentation and favoritism to the onset of modern civil conflicts, we conducted separate analysis at the national and subnational levels. At both levels we focused on the mediating effects of economic inequality and political grievances. Our results indicate that the effect of historical religious fragmentation and favoritism was transmitted to contemporary civil conflicts via economic inequalities and political grievances among disadvantaged groups. Overall, the results indicate that both greed and grievance were instrumental in transmission.

APPENDIX A

In this appendix we show the full results of regression analysis at the country and ethnic group levels. Table A1 corresponds to Table 5 with full statistics for controls, and Table A2 likewise corresponds to Table 6 with full statistics.

Table A1

The Impact of Historical Religious Fragmentation and Favoritism on Civil Conflict

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
HRS(1, 1): Historical religious fragmentation with coreligionist ruler	0.0422***	0.0342***	0.0327***	0.0321***	0.0353***	0.0278***
	(0.0091)	(0.0093)	(0.0086)	(0.0089)	(0.0092)	(0.0078)
HRS(1, 0): Historical religious fragmentation with non-coreligionist ruler	0.0124	0.0090	0.0167	0.0190	0.0091	-0.0103
	(0.0127)	(0.0153)	(0.0159)	(0.0161)	(0.0176)	(0.0165)
Religious frac.				-0.0155	-0.0194*	-0.0192
				(0.0101)	(0.0111)	(0.0116)
Ethnic frac.				0.0179	0.0165	0.0100
				(0.0130)	(0.0132)	(0.0130)
Ethnolinguistic pol.				0.0034	0.0038	0.0038
				(0.0097)	(0.0104)	(0.0109)
Absolute latitude		-0.5084	0.1495	0.2238	0.3269	0.1417
		(0.4858)	(0.4404)	(0.4777)	(0.5454)	(0.4593)
Ruggedness		1.6062	0.8108	2.0883	1.7934	3.2007
		(3.3585)	(3.2984)	(3.5218)	(3.6179)	(3.3764)
Mean elevation		-0.0168	-0.0073	-0.0088	-0.0058	-0.0188*
		(0.0109)	(0.0101)	(0.0102)	(0.0105)	(0.0106)
Range of elevation		0.0085**	0.0077*	0.0056	0.0040	0.0011
		(0.0040)	(0.0039)	(0.0041)	(0.0038)	(0.0036)
Percent forest		-0.2559**	-0.1602	-0.1423	-0.0763	-0.0226
		(0.1120)	(0.1291)	(0.1254)	(0.1333)	(0.1195)
Mean soil suitability		27.8427**	29.0752*	33.1048**	38.1557**	19.3153
		(14.0016)	(15.3602)	(15.7076)	(16.6313)	(15.9627)
Range of soil suitability		9.4291	8.1084	6.8799	9.1486	12.8893
		(9.9451)	(11.4928)	(12.6898)	(13.5617)	(14.5384)
Percent desert		0.1712	0.2772	0.2796	0.3381	0.5187*
		(0.1714)	(0.2223)	(0.2272)	(0.2525)	(0.2777)
Distance to waterway		0.0041	0.0002	-0.0004	0.0026	-0.0037
		(0.0109)	(0.0110)	(0.0108)	(0.0111)	(0.0111)
Island		-0.0075	-0.0077	-0.0087	-0.0106	-0.0107
		(0.0068)	(0.0088)	(0.0089)	(0.0093)	(0.0086)
Mean temperature		-0.1997	1.0474	0.6976	0.7055	-0.5541
		(0.8801)	(0.7654)	(0.7926)	(0.8975)	(0.9557)
Temperature volatility		24.2739	28.1192	20.4343	17.9171	7.4487
		(23.9488)	(26.0960)	(24.5928)	(24.9103)	(23.6672)
Mean precipitation		0.0053	0.0107	0.0089	0.0067	0.0044
		(0.0063)	(0.0070)	(0.0069)	(0.0073)	(0.0062)
Precipitation volatility		-0.0190	-0.0176	-0.0046	0.0025	-0.0257
		(0.0434)	(0.0432)	(0.0454)	(0.0427)	(0.0409)
Petroleum reserve		0.0102**	0.0091*	0.0087*	0.0083	0.0100**
		(0.0048)	(0.0052)	(0.0052)	(0.0051)	(0.0049)
Africa		0.0154**	0.0200	0.0132	0.0083	-0.0098
		(0.0067)	(0.0122)	(0.0121)	(0.0140)	(0.0154)
Americas		-0.0177*	-0.0501*	-0.0597**	-0.0661**	-0.0767**
		(0.0090)	(0.0273)	(0.0272)	(0.0292)	(0.0303)
Europe		0.0032	0.0096	0.0051	0.0046	-0.0045
		(0.0135)	(0.0165)	(0.0166)	(0.0185)	(0.0190)

Oceania		-0.0075	-0.0215	-0.0146	-0.0218	-0.0275
		(0.0092)	(0.0177)	(0.0180)	(0.0189)	(0.0184)
Distance to historical trade routes			0.0070*	0.0082**	0.0076**	0.0095**
			(0.0037)	(0.0035)	(0.0035)	(0.0037)
Prevalence of historical conflict			0.0644	0.0925	0.0821	0.1367
			(0.1190)	(0.1144)	(0.1087)	(0.1079)
Ln population in 1000			0.0027	0.0035*	0.0027	0.0035*
			(0.0018)	(0.0019)	(0.0020)	(0.0018)
Ln population in 1500			0.0000	0.0005	0.0011	-0.0011
			(0.0024)	(0.0025)	(0.0025)	(0.0033)
Ln distance to technological frontier in 1000			0.0006	-0.0001	0.0000	0.0010
			(0.0024)	(0.0024)	(0.0025)	(0.0030)
Ln distance to technological frontier in 1500			0.0035	0.0037*	0.0030	0.0019
			(0.0021)	(0.0021)	(0.0022)	(0.0019)
Ln distance to religion capitals			0.0062	0.0068	0.0064	0.0041
			(0.0040)	(0.0041)	(0.0041)	(0.0038)
Ancestry adjusted genetic diversity			0.3716**	0.4516***	0.4152***	0.4435***
			(0.1434)	(0.1571)	(0.1566)	(0.1554)
State history			-0.0030	-0.0023	-0.0042	0.0062
			(0.0104)	(0.0102)	(0.0114)	(0.0100)
Duration of human settlement			-9.3624	-9.7967	-10.1463	-5.2086
			(15.3482)	(16.7491)	(18.0396)	(17.5972)
Time since Neolithic transition			0.0049	0.0036	0.0038	0.0004
			(0.0038)	(0.0038)	(0.0041)	(0.0037)
Colony, United Kingdom					0.0096	0.0136*
					(0.0064)	(0.0070)
Colony, France					0.0052	0.0013
					(0.0099)	(0.0098)
Colony, Other powers					0.0129*	0.0147*
					(0.0075)	(0.0075)
British legal origin					0.0009	-0.0047
					(0.0087)	(0.0089)
French legal origin					-0.0015	-0.0021
					(0.0061)	(0.0072)
Executive constraint 1960-2017						-0.0037
						(0.0045)
Democracy 1960-2017						0.0142
						(0.0163)
Autocracy 1960-2017						-0.0242
						(0.0189)
Ln population 1960-2017						0.0015
						(0.0034)
Ln GDP per capita 1960-2017						-0.0107***
						(0.0031)
Observations	150	150	150	150	150	147
R-squared	0.192	0.404	0.465	0.479	0.502	0.593

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table A2
The Impact of Historical Ethnoreligious Fragmentation and Favoritism on Civil Conflict

VARIABLES	(1)	(2)	(3)	(4)	(5)
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	0.0050***	0.0047***	0.0045**	0.0050**	0.0048**
	(0.0017)	(0.0017)	(0.0018)	(0.0022)	(0.0022)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	0.0056***	0.0052**	0.0053**	-0.0024	-0.0021
	(0.0020)	(0.0021)	(0.0021)	(0.0030)	(0.0030)
Mean elevation		-0.4250***	-0.3588***	-0.0877	-0.0714
		(0.1313)	(0.1304)	(0.1744)	(0.1775)
Range of elevation		0.0064	0.0007	0.0841	0.0988
		(0.0515)	(0.0494)	(0.0726)	(0.0735)
Ruggedness		0.0021***	0.0019***	-0.0001	-0.0003
		(0.0006)	(0.0006)	(0.0010)	(0.0011)
Temperature variation		-0.3895**	-0.2537	0.4076	0.3690
		(0.1791)	(0.2250)	(0.5010)	(0.4975)
Diurnal temperature range		47.6138	18.3937	-138.9762	-142.8187
		(34.1418)	(36.9429)	(94.4116)	(94.7782)
Precipitation variation		0.4885	-1.8530	-4.8445	-4.4272
		(2.4136)	(2.5542)	(5.0895)	(5.1563)
Distance to coast		0.0003*	0.0003*	0.0001	0.0000
		(0.0002)	(0.0002)	(0.0002)	(0.0002)
Mean soil quality		0.0069	0.0625	-0.1191	-0.1062
		(0.0938)	(0.1026)	(0.1831)	(0.1855)
Range of soil quality		0.0721	0.1293	0.1233	0.1733
		(0.0967)	(0.0974)	(0.1371)	(0.1460)
Mines		-0.0022***	-0.0020***	0.0008	0.0009
		(0.0007)	(0.0006)	(0.0009)	(0.0010)
Group size					-0.0038
					(0.0028)
Observations	659	659	659	659	659
R-squared	0.022	0.043	0.063	0.340	0.342
Regional origins of race FE			x	x	x
Country FE				x	x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Regional origins of race fixed effects are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

APPENDIX B
ROBUSTNESS CHECKS AT THE COUNTRY LEVEL

In this appendix, we run various tests to check the robustness of our results to alternative specifications at the country level.

i. *Alternative measures of civil conflict from the UCDP-PRIO dataset*

Consider first the question of whether our conclusions are robust to using other measures of civil conflict as the dependent variable. In our baseline analysis, we defined the dependent variable as the average number of new civil conflict eruptions per year in the period between 1960 and 2017. To see the sensitivity of our results to this specification, we now differentiate between the territorial and governmental subcategories of civil conflicts and consider influences on high-intensity conflicts (i.e., reached over 1,000 deaths in one year). Table B1 shows the results of OLS method of estimation using the same control variables as the baseline model.

Table B1
Robustness to other Measures of Conflict

VARIABLES	(1) Conflict	(2) Territorial conflict	(3) Governmental conflict	(4) High intensity conflict
HRS(1,1): Historical religious	0.032***	0.027***	0.004	0.012**
fragmentation with coreligionist ruler	(0.009)	(0.008)	(0.003)	(0.005)
HRS(1,0): Historical religious	0.014	0.017	-0.002	0.004
fragmentation with non-coreligionist ruler	(0.016)	(0.013)	(0.007)	(0.010)
Observations	150	150	150	150
R-squared	0.475	0.451	0.344	0.375
Geographic and climatic controls	x	x	x	x
Continent FE	x	x	x	x
Historical controls	x	x	x	x

Note: The dependent variable is the log of average number of new civil, territorial, governmental, and high-intensity conflict eruptions per year, as stated in the first row, calculated for the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Our results are robust to other measures of civil conflicts found in the UCDP-PRIO dataset. The signs and significance of the coefficients of the two key variables are mostly consistent across equations, indicating that historical religious fragmentation with shared religion with rulers explains not just the average number of new civil conflict eruptions per year but also their intensity and subcategories of territorial and governmental conflicts. Regarding the latter, it is interesting that the coefficient of our key variable is insignificant in the third column, and the magnitude is substantially larger for territorial than governmental conflicts. Although the theoretical model did not distinguish between types of conflicts, the results indicate that the favoritism and grievances emanating from historically shared religion with rulers in fragmented societies currently have a greater impact on the onset of territorial as compared to governmental conflicts.

ii. Religious versus other conflicts

We next turn to the question of how our results differ between religious and non-religious conflicts. Svennon and Nilsson (2018) have recently introduced the Religion and Armed Conflict (RELAC) Data, based on the dyadic version of the UCDP data. The RELAC data focuses on 420 dyads for civil conflicts that took place during the period between 1975-2015, including information on "both whether the conflict is fought over a religious issue and whether the other conflict party is from a different religious identity." (Svennon and Nilsson, 2018: 1129). We use this information to construct two variables that differentiate between religious and non-religious conflicts. The variable Religious Conflict refers to the average number of new religious civil conflicts in a country during the period between 1975 and 2015. Similarly, the variable Non-Religious Conflict is the average number of new non-religious civil conflicts during the same period by the above criteria. We take natural logarithm of these variables to serve as dependent variables in OLS analysis.

Table B2
Religious and Non-Religious Conflicts

VARIABLES	(1) Conflict	(2) Religious conflict	(3) Non-religious conflict
HRS(1,1): Historical religious fragmentation with coreligionist ruler	0.042***	0.032***	0.012*
	(0.011)	(0.008)	(0.007)
HRS(1,0): Historical religious fragmentation with non-coreligionist ruler	0.013	0.017	-0.004
	(0.021)	(0.017)	(0.014)
Observations	150	150	150
R-squared	0.436	0.447	0.269
Geographic and climatic controls	x	x	x
Continent FE	x	x	x
Historical controls	x	x	x

Note: The dependent variable is the log of average number of new civil, religious, and non-religious conflict eruptions per year, as stated in the first row. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island

nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects controls for Africa, Americas, Asia, Oceania and Europe being reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance from the historical regional technological frontiers at 1000 and 1500, historical population at 1000 and 1500, state antiquity, the time since Neolithic transition, the duration of human settlement and historical conflicts. Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Since the dyadic focus of the RELAC data differs from the measures of conflict used in our baseline analysis, we first convert it to conflict-year format and run the analysis on the full dataset to get results comparable to our baseline estimates. The results, reported in the first column of Table B2, are consistent, as expected. In addition, columns (2) and (3) show interesting differences between religious and non-religious conflicts. The coefficient of our key variable, historically shared religion with rulers in fragmented societies, is positive and significant in both types of conflicts. Remarkably, the magnitude of this variable is more than twice for religious conflicts than non-religious conflicts.

iii. 5-year incidence and 1-year onset measures of conflict

Given our interest in examining the deep historical roots of modern conflict, in baseline analysis we examined the effects of our key variables on new civil conflict eruptions during the period between 1960 and 2017 as a whole, rather than on incidence or onset measures defined for shorter time intervals. This raises the question of whether our results would hold if we changed the dependent variable to incidence or onset measures of conflict, which are frequently used by other researchers. To examine this question, in this section we run regression analysis by using 5-year incidence and yearly onset measures as dependent variables. Taking into account the temporal dimension of conflict also enables us to account for time-varying controls such as income, population and institutional characteristics.

Table B3
The Impact of *HRS* on 5-Year Incidence and Yearly Onset Measures of Conflict

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	5-YEAR CONFLICT INCIDENCE			1-YEAR CONFLICT ONSET		
HRS(1, 1): Historical religious fragmentation with coreligionist ruler	0.1421***	0.1820***	0.1748***	0.0134***	0.0133***	0.0084**
	(0.0426)	(0.0457)	(0.0530)	(0.0029)	(0.0033)	(0.0034)
HRS(1, 0): Historical religious fragmentation with non-coreligionist ruler	-0.1082	-0.1343	-0.1920**	0.0016	0.0027	0.0081
	(0.0822)	(0.0840)	(0.0926)	(0.0071)	(0.0070)	(0.0067)
Observations	1,571	1,571	1,300	6,944	6,929	5,709
Geographic and climatic controls	x	x	x	x	x	x
Continent FE	x	x	x	x	x	x
Year FE	x	x	x	x	x	x
Temporal spillover	x	x	x	x	x	x
Historical controls	x	x	x	x	x	x
Diversity measures		x	x		x	x
Colonial history, legal origin		x	x		x	x
Population, GDP, Institutions			x			x

Note: The dependent variables are dummy variables that equal one if there's been an incidence of conflict during a five-year period (columns 1-3) or a new conflict eruption in a year (Columns 4-6). Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B3 shows the results of the Probit analysis of the effects of our key variables on 5-year incidence and 1-year onset measures of conflict. The table presents the marginal effects of *HRS* on conflict measures while holding other control variables at their mean values. Columns (1) and (4) we include the same set of control variables as in our baseline analysis (Table 5). In addition, we include the colonial history and legal origin of nations as well as their population, GDP, and institutions as time-varying variables also included in Table 5. The results clearly show that the signs and significance of the coefficients of our key variables are generally consistent to these alternative specifications of the dependent variables. Once again, this indicates that historical religious fragmentation with shared religion with rulers explains not just the number of new civil conflict eruptions per year over a long-time horizon but also their shorter-term incidence and onset during this period.

iv. *Geographic subsamples*

The baseline analysis was based on all countries for which we could find comprehensive data on our main variables. Our historical focus raises the question of whether our results would change across geographic regions of the world with vastly different historical experiences. A similar question concerns whether our results are driven primarily by certain regions of the world, such as the Middle East and North Africa (MENA) region, which has experienced distinctly high incidents of civil conflicts in recent decades. We address these questions by restricting the sample in two different ways. In Table B4, we run the same regressions as the baseline model, except we restrict the sample to old world countries (Africa, Asia, and Europe). Similarly, in Table B5 we exclude the countries in the Middle East and North Africa region.

Table B4
Excluding the New World

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)

HRS(1,1): Historical religious fragmentation	0.042***	0.033***	0.033***	0.033***	0.035***	0.029***
with coreligionist ruler	(0.009)	(0.010)	(0.009)	(0.010)	(0.010)	(0.009)
HRS(1,0): Historical religious fragmentation	0.007	0.009	0.015	0.018	0.008	-0.013
with non-coreligionist ruler	(0.013)	(0.015)	(0.016)	(0.017)	(0.019)	(0.019)
Observations	123	123	123	123	123	121
R-squared	0.186	0.427	0.513	0.523	0.550	0.644
Geographic and climatic controls		x	x	x	x	x
Continent FE		x	x	x	x	x
Historical controls			x	x	x	x
Diversity measures				x	x	x
Colonial history, legal origin					x	x
Current pop, GDP, Institutions						x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa and Asia, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As seen in Tables B4 and B5, our results remain consistent with the baseline analysis. The coefficient of historical religious fragmentation with coreligionist rulers is positive and highly significant in all columns. Interestingly, the coefficient of this variable is about 10-15 percent higher in Table B5 than in Tables B4 and 5 (baseline analysis), indicating that historical fragmentation and favoritism had greater effect on conflict in countries outside of the MENA region. Overall, our results are robust to running the analysis by excluding certain geographic regions from the sample.

Table B5
Excluding the Middle East and North Africa

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
HRS(1,1): Historical religious fragmentation	0.048***	0.036***	0.036***	0.034***	0.041***	0.043***
with coreligionist ruler	(0.011)	(0.010)	(0.009)	(0.010)	(0.010)	(0.009)
HRS(1,0): Historical religious fragmentation	0.018	0.009	0.019	0.020	0.001	-0.025
with non-coreligionist ruler	(0.014)	(0.017)	(0.018)	(0.018)	(0.019)	(0.021)
Observations	134	134	134	134	134	131
R-squared	0.218	0.431	0.487	0.498	0.539	0.648
Geographic and climatic controls		x	x	x	x	x
Continent FE		x	x	x	x	x

Historical controls	x	x	x	x
Diversity measures		x	x	x
Colonial history, legal origin			x	x
Current pop, GDP, Institutions				x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

v. *Other measures of diversity*

In Tables 3 and 4, we examined how our key indices compared against other measures of diversity previously used by researchers in the literature. Those comparisons, however, were based on individual correlations with our indices and simple *unconditioned* analysis of "horse race" regressions. The comparisons showed that the coefficient of historical fragmentation with coreligionist rulers remained positive and highly significant even after previously proposed measures were included in the analysis. We now examine the remaining question of how the results would change if we run the same regressions with the full set of controls used in the baseline analysis. We choose six representative measures of diversity for this analysis.

Table B6
Accounting for Other Measures of Diversity

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
HRS(1,1): Historical religious fragmentation with coreligionist ruler	0.031***	0.031***	0.030***	0.026***	0.027***	0.049***	0.024***	0.046**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.015)	(0.009)	(0.021)
HRS(1,0): Historical religious fragmentation with non-coreligionist ruler	0.016	0.015	0.014	0.014	0.009	-0.006	0.013	-0.058
	(0.016)	(0.016)	(0.017)	(0.016)	(0.016)	(0.044)	(0.017)	(0.049)
Observations	146	146	146	145	150	70	142	68
R-squared	0.462	0.465	0.466	0.491	0.492	0.676	0.486	0.756
ER ethnolinguistic pol.	x						x	x
RQ ethnolinguistic pol.		x					x	x
Ethnic Greenberg			x				x	x

Linguistic frac.				x			x	x
Ethnolinguistic frac.					x		x	x
(level-6)								
Cultural frac.						x		x
Geographic and climatic controls	x	x	x	x	x	x	x	x
Continent FE	x	x	x	x	x	x	x	x
Historical controls	x	x	x	x	x	x	x	x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As seen in Table B6, the coefficient of historical fragmentation with coreligionist rulers remains positive and highly significant even after we include the full set of controls used in the baseline analysis as well as various measures of diversity. Compared to baseline regression results reported in Table 5, the coefficient of our key variable drops somewhat in columns 4 and 5 when measures of linguistic and ethnolinguistic fractionalization are included in the analysis. This makes sense because of the high correlation between these variables, as reported in Table 3. In contrast, the coefficient rises significantly when the measure of cultural fractionalization is included in columns 6 and 8, but the sample size is significantly smaller in those regressions. Overall, our results are robust to the inclusion of various measures of diversity in the analysis.

vi. *Religion shares*

In addition to standard measures of diversity discussed above, researchers have sometimes used simple fractions of major religious groups in the analysis of civil conflicts. This is often based on claims that certain religious groups may be more inclined than others to engage in conflict (Svensson, 2020). These observations raise the question of whether including fractions of religious groups, rather than standard measures of diversity, in the analysis might change our results regarding the effect of historical fragmentation and favoritism.

Table B7
Accounting for Religion Shares

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)

HRS(1,1): Historical religious fragmentation	0.035***	0.029***	0.029***	0.029***	0.033***	0.030***
with coreligionist ruler	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)	(0.008)
HRS(1,0): Historical religious fragmentation	-0.005	-0.002	0.002	0.003	-0.009	-0.018
with non-coreligionist ruler	(0.013)	(0.015)	(0.016)	(0.017)	(0.019)	(0.019)
Observations	148	148	148	148	148	145
R-squared	0.265	0.448	0.518	0.522	0.555	0.620
Religion shares	x	x	x	x	x	x
Geographic and climatic controls		x	x	x	x	X
Continent FE		x	x	x	x	x
Historical controls			x	x	x	x
Diversity measures				x	x	x
Colonial history, legal origin					x	x
Current pop, GDP, Institutions						x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Religion shares include the fractions of Muslims, Catholics, and Protestants. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

To test for this conjecture, we include the fractions of Muslims, Catholics, and Protestants in the analysis, other religious groups being the reference category. As seen in Table B7, our results are robust to this change in all specifications of the model.

vii. *Discount rate (ρ)*

We estimated the baseline model by specifying to the value of the historical discount rate (ρ) to equal 0.001. If we raise this rate, we would be raising the effect of history relative to recent years, as indicated by the formula for the indices of historical religious difference. We saw in Table 1 how our measures of historical religious structure responded to changing the value of this parameter. We now examine the sensitivity of our regression results to higher values of this parameter, specifically by setting it to equal 0.003. As seen in Table B8, the coefficient of historical religious fragmentation with coreligionist rulers falls, as expected, but remains positive and significant in all specifications.

Table B8
Robustness to Using a Different Discount Rate (ρ = 0.003)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
HRS(1,1): Historical religious	0.037***	0.028***	0.025***	0.025***	0.028***	0.023***
fragmentation with coreligionist ruler	(0.008)	(0.009)	(0.008)	(0.008)	(0.009)	(0.008)
HRS(1,0): Historical religious	0.019	0.013	0.018	0.020	0.011	0.002
fragmentation with non-coreligionist ruler	(0.012)	(0.012)	(0.013)	(0.014)	(0.014)	(0.014)
Observations	150	150	150	150	150	147
R-squared	0.155	0.406	0.459	0.477	0.502	0.589
Geographic and climatic controls		x	x	x	x	x
Continent FE		x	x	x	x	x
Historical controls			x	x	x	x
Diversity measures				x	x	x
Colonial history, legal origin					x	x
Current pop, GDP, Institutions						x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

viii. Selection on unobservables

Although we included several control variables in the analysis, the concern remains whether unobserved heterogeneity could have driven away the coefficients of our key explanatory variables down to zero. To test for this concern, we use the methodology recently suggested by Oster (2019). This methodology combines information about coefficient stability with R-squared movements to provide estimates of adjusted coefficients for explanatory variables of interest, depending on assumptions regarding the value of maximum R-squared from a hypothetical regression that includes both observed and unobserved controls (Rmax) and a value for relative degree of selection on observed and unobserved variables (δ). Assuming Rmax=1.3*R-squared of the model with observables and δ=1, we calculate the Oster coefficient for historical religious fragmentation with coreligionist ruler in the baseline model (Column 2) to be 0.0221. Since the intervals between these values and the estimated coefficients reported in Table 5 exclude zero, we reject the null hypothesis that the coefficient in Table 5 can be explained away by unobservables.

Table B9

Robustness to Selection on Unobservables

VARIABLES	(1)	(2)	(3)	(4)	(5)
HRS(1,1): Historical religious fragmentation with coreligionist ruler	0.033***	0.032***	0.031***	0.034***	0.029***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)
HRS(1,0): Historical religious fragmentation with non-coreligionist ruler	0.006	0.014	0.015	0.004	-0.012
	(0.015)	(0.016)	(0.016)	(0.017)	(0.017)
Observations	150	150	150	150	147
R-squared	0.419	0.475	0.491	0.518	0.601
Oster beta	0.0257	0.0221	0.0196	0.0238	0.0148
Geographic and climatic controls	x	x	x	x	x
Continent FE	x	x	x	x	x
Historical controls		x	x	x	x
Diversity measures			x	x	x
Colonial history, legal origin				x	x
Current pop, GDP, Institutions					x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

ix. *Spatial dependence*

To consider spatial dependence across countries, we estimate spatial-autoregressive models with autoregressive disturbances (SARAR) of order (1,1). This involves estimating AR(1) coefficients λ and ρ associated with the spatial lags in the outcome variable and the error term, reported in Table B10. The resulting estimates of our key variable of interest obtained by the SARAR model are virtually the same as those reported in Table 5. This finding provides strong support that our results are robust to spatial dependence across countries.

Table B10
Accounting for Spatial Dependence (SARAR(1,1))

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)

HRS(1,1): Historical religious fragmentation	0.043***	0.035***	0.034***	0.033***	0.036***	0.030***
with coreligionist ruler	(0.009)	(0.008)	(0.007)	(0.008)	(0.008)	(0.007)
HRS(1,0): Historical religious fragmentation	0.011	0.008	0.013	0.014	0.002	-0.012
with non-coreligionist ruler	(0.012)	(0.014)	(0.014)	(0.014)	(0.014)	(0.013)
Spatial lag AR(1) of conflict (λ)	0.061	0.612	-0.173	-0.306	-0.595	-1.235
	(0.558)	(0.542)	(0.724)	(0.742)	(0.740)	(0.797)
Spatial lag AR(1) of error (ρ)	-0.279	-1.167**	-0.494	-0.598	-0.539	0.594
	(0.493)	(0.582)	(0.585)	(0.562)	(0.477)	(0.508)
Observations	150	150	150	150	150	147
Geographic and climatic controls		x	x	x	x	x
Continent FE		x	x	x	x	x
Historical controls			x	x	x	x
Diversity measures				x	x	x
Colonial history, legal origin					x	x
Current pop, GDP, Institutions						x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Contemporary variables in the last category are current population, GDP per capita, democracy, autocracy and the degree of executive constraints. Spatially corrected robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

x. *Alternative thresholds for secondary substantial religious groups*

In baseline analysis, the threshold that we used to determine whether other substantial religious groups existed in a territory was whether the secondary religion's population share exceeded ten percent, if this information was available. Since this is a somewhat arbitrary cutoff, in this section we to test the sensitivity of our analysis to the use of alternative thresholds for this determination. Specifically, we generate data corresponding to thresholds of five and twenty percent. Since the estimates of population shares of religious groups given in Brown and James (2015) go back at most to the 1700s, this does not affect our data for previous centuries, for which we used non-quantitative information to identify the main religion and to determine whether a substantial secondary religion existed.

Table B11
Robustness to Using Different Thresholds for Secondary Religious Groups

VARIABLES	(1) 5 %	(2) 10%	(3) 20%
HRS(1,1): Historical religious fragmentation with coreligionist ruler	0.035***	0.034***	0.034***
	(0.009)	(0.009)	(0.009)
HRS(1,0): Historical religious fragmentation with non-coreligionist ruler	-0.002	0.004	-0.005
	(0.019)	(0.017)	(0.019)
Observations	150	150	150
R-squared	0.524	0.518	0.514
Geographic and climatic controls	x	x	x
Continent FE	x	x	x
Historical controls	x	x	x
Diversity measures	x	x	x
Colonial history, legal origin	x	x	x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. The presence of a secondary substantial religious group is measured by thresholds of five percent in the first column, ten percent in the second column, and twenty percent in the last column. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Diversity measures are ethnic fractionalization, religious fractionalization, and ethnolinguistic polarization. Dummy variables for colonial history include the United Kingdom, France, and other major powers; and legal origin dummies include British and French legal origin. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B11 reports the regression results of the baseline model estimated under the three alternative specifications of the threshold for determining the presence of a substantial secondary religion. As seen from the coefficients of our key variables, our results are virtually unchanged between the thresholds of five, ten, and twenty percent.

xi. *Historical Conflicts*

Our baseline analysis focused on modern civil conflicts, with a dependent variable calculated for the period between 1960 and 2017. The question remains whether the same theoretical and empirical approach can also be used to explain civil conflicts in earlier history. To examine this question, in this section we use Brecke's (1999) data on the incidence of historical territorial conflicts, compiled by Dincecco, et al. (2019). The difficulty with using the Brecke dataset for this analysis is that it is extremely incomplete for earlier periods due to lack of recorded information. Moreover, it does not make a clear distinction between civil and inter-state conflicts, which in any case is not as well defined

for major empires that covered vast territories. With these caveats in mind, it is nevertheless an intriguing question to see whether our key measures of historical religious fragmentation and shared religion with rulers predicts historical conflicts at the territory level.

Table B12 shows the results of cross-sectional analysis of the effects of our key indices on historical conflicts during the period between 1400 and 1798, the coverage of the Brecke dataset. For a framework parallel to our baseline regressions, we have defined the dependent variables of this analysis as the log of the number of historical conflicts in a given century. Therefore, the key variables of interest, namely the *HRS*(1,1) and *HRS*(1,0) indices, have been appropriately adjusted to reflect cumulative totals up until the beginning of the corresponding century.

Table B12
Historical Conflicts

TIME PERIOD	VARIABLES	(1) 1400-1499	(2) 1500-1599	(3) 1600-1699	(3) 1700-1799
1000-1400	*HRS*(1,1): Historical religious fragmentation with coreligionist ruler	0.058			
		(0.211)			
	HRS(1,0): Historical religious fragmentation with non-coreligionist ruler	0.641			
		(1.088)			
1000-1500	*HRS*(1,1): Historical religious fragmentation with coreligionist ruler		0.081		
			(0.250)		
	HRS(1,0): Historical religious fragmentation with non-coreligionist ruler		-0.803		
			(0.701)		
1000-1600	*HRS*(1,1): Historical religious fragmentation with coreligionist ruler			-0.008	
				(0.242)	
	HRS(1,0): Historical religious fragmentation with non-coreligionist ruler			-0.593	
				(0.598)	
1000-1700	*HRS*(1,1): Historical religious fragmentation with coreligionist ruler				0.095
					(0.249)
	HRS(1,0): Historical religious fragmentation with non-coreligionist ruler				-0.463
					(0.595)
	Observations	150	150	150	150
	R-squared	0.549	0.604	0.484	0.372
	Geographic and climatic controls	x	x	x	x
	Continent FE	x	x	x	x
	Historical controls	x	x	x	x

Note: The dependent variables are the log of the number of historical conflicts in a given century, as specified in column headings. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical

controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, time since Neolithic transition, and duration of human settlement. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B12 shows the effects of our key variables on historical conflicts. Interestingly, the coefficients of interest in some of the estimated models are larger in size than those reported in Table 5 for the analysis of modern conflicts. But none of the coefficients of interest in Table B12 reach statistical significance at conventional levels for any of the centuries. Several factors may have contributed to this result. For example, the poor quality and coverage of conflict data, discussed above, may have led to large standard errors. Similarly, the Brecke data includes major wars, but not less important wars or civil conflicts, likely resulting in a poor fit in our framework. In addition, our own measures of religious fragmentation have lower quality for the pre-1700 period. Moreover, there may have been a shift in the way religious fragmentation mattered for post versus pre-1800 conflicts. Such a shift may have followed, for example, the transition from major empires to nation-states during this period. played a role. Unfortunately, it's not feasible to overcome these potential concerns.

We can rule out one possible reason for the discrepancy in the results, namely the mismatch between the period for which we compute our indices and the period for conflict outcomes. This could be the case if historical religious fragmentation and favoritism had a more short-lived effect on major historical conflicts than modern conflicts. To examine this possibility, we reran the regressions reported in Table B.12 keeping the dependent variables the same but calculating our indices as measured up to the end of the century for which conflict is measured (i.e., *HRS* measured over 1000-1500 for conflicts during 1400-1500, etc.). The new results are qualitatively similar to those reported in the table. While this specification would have created concerns for reverse causality, it nevertheless allowed us to rule out the possibility of contemporaneous effect on major historical conflicts.

APPENDIX C
ROBUSTNESS CHECKS AT THE ETHNIC GROUP LEVEL

In this appendix, we run various tests to check the robustness of our results to alternative specifications at the subnational level.

i. Other measures of conflict

In Appendix B, we considered at the country level the question of whether our conclusions are robust to using other measures of civil conflict as the dependent variable. We now run the same robustness test at the ethnicity level. The dependent variable of our baseline analysis in Table 6 was defined as the average number of new civil conflict eruptions per year in the period between 1960 and 2017. To see how our results change across subcategories of conflicts, we now differentiate between territorial and governmental conflicts. As seen in Table C1, the coefficient of historical ethnoreligious fragmentation with non-coreligionist rulers remains positive in both subcategories. Interestingly, the significance of this variable rises even further for governmental conflicts, but it disappears for territorial conflicts. This finding indicates that the effect of historical favoritism on contemporary conflicts among ethnic groups is more significant in governmental than territorial conflicts.

Table C1
The Impact of Historical Ethnoreligious Structure on Other Measures of Civil Conflict

VARIABLES	(1) Conflict	(2) Governmental conflict	(3) Territorial conflict
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	0.00497**	0.00304***	0.00195
	(0.00224)	(0.00109)	(0.00197)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	-0.00237	0.00090	-0.00329
	(0.00295)	(0.00118)	(0.00265)
Observations	659	659	659
R-squared	0.340	0.379	0.349
Geographic and climatic controls	x	x	x
Regional origins of race FE	x	x	x
Country FE	x	x	x

Note: The dependent variable is the log of average number of new civil, governmental, and territorial conflict eruptions per year, as stated in the first row, calculated for the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, distance to the nearest waterway, diurnal temperature range, volatility of temperature and volatility of precipitation. Regional origins of race fixed effects are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

ii. Excluding small groups

For another test of robustness, we consider whether our results at the ethnicity level are sensitive to group size. The sample for the baseline analysis reported in Table 6 consisted of all groups included in the Ethnic Power Relations dataset. In this appendix, we examine how the results change when we exclude smaller groups from analysis. The estimates reported in different columns of Table C2 correspond to incremental restrictions of the sample based on group size, starting with column 1 that shows the baseline results for the full sample. The results with different size groups are clearly consistent with the baseline analysis, as the coefficient of historical ethnoreligious fragmentation with non-coreligionist rulers remains positive and significant across all columns. In fact, the coefficient of this variable rises in magnitude and becomes more significant as the sample is restricted incrementally between columns 2 and 4.

Table C2
The Impact of *HES* on Civil Conflict- Excluding Small Ethnic Groups

VARIABLES	(1) Conflict	(2) Conflict (group size>=.02)	(3) Conflict (group size>=.04)	(4) Conflict (group size>=.06)
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	0.0050**	0.0072***	0.0095***	0.0091***
	(0.0022)	(0.0028)	(0.0035)	(0.0035)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	-0.0024	-0.0007	-0.0001	-0.0009
	(0.0030)	(0.0052)	(0.0067)	(0.0071)
Observations	659	422	361	318
R-squared	0.340	0.378	0.426	0.455
Geographic and climatic controls	x	x	x	x
Regional origins of race FE	x	x	x	x
Country FE	x	x	x	x

Note: The dependent variable is the average number of new civil conflict eruptions per year during the period between 1960 and 2017. Columns 2-4 restrict the sample by groups size, as specified in the top row. Geographic and climatic controls include terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, distance to the nearest waterway, diurnal temperature range, volatility of temperature and volatility of precipitation. Regional origins of race fixed effects are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

iii. Accounting for political exclusion

In addition, we test whether the results hold when we control for political exclusion at the ethnic level. The reason for this test is to help disentangle the effects of religious and ethnic exclusion. Could it be that the positive relationship that we observe between political disfavoritism (Historical ethnoreligious fragmentation with non-coreligionist rulers) and conflict is actually due to the exclusion of the ethnic group from power? To consider this

possibility, we include the political exclusion of the ethnic group as a variable (from the EPR data set) in the analysis. This allows us to examine whether among ethnic groups that are equally excluded from power those that were ruled by non-coreligionist rulers were more likely than others to participate in conflict. As seen in Table C, the magnitude and significance of the coefficients of our key variables remain robust to this test.

Table C3
The Impact of Historical Ethnoreligious Fragmentation and Favoritism on Civil Conflict- Accounting for Political Exclusion

VARIABLES	(1)	(2)	(3)	(4)	(5)
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	0.0048***	0.0044***	0.0040**	0.0050**	0.0051**
	(0.0017)	(0.0017)	(0.0017)	(0.0022)	(0.0022)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	0.0057***	0.0051**	0.0052**	-0.0015	-0.0016
	(0.0020)	(0.0021)	(0.0021)	(0.0029)	(0.0029)
Political exclusion	0.0049***	0.0060***	0.0076***	0.0084***	0.0095***
	(0.0011)	(0.0013)	(0.0015)	(0.0017)	(0.0020)
Observations	659	659	659	659	659
R-squared	0.044	0.073	0.104	0.369	0.371
Geographic and climatic controls		x	x	x	x
Regional origins of race FE			x	x	x
Country FE				x	x
Group size					x

Notes: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, distance to the nearest waterway, diurnal temperature range, volatility of temperature and volatility of precipitation. Regional origins of race fixed effects are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

iv. Excluding the New World

The baseline analysis at the subnational level was based on all ethnic groups for which we could find comprehensive data on our main variables. However, the EPR dataset provides information regarding the religious composition of ethnic groups as measured recently, subsequent to several major waves of religious conversion that took place during our time period. This raises the question of whether our results would change across geographic regions of the world in which ethnic groups had vastly different historical experiences. This is particularly important for the New World in which indigenous ethnic groups were subjected to decades of colonial rule with forced conversions.

Table C4
Excluding the New World

	(1)	(2)	(3)	(4)	(5)

VARIABLES					
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	0.0045**	0.0039**	0.0042**	0.0053**	0.0052**
	(0.0018)	(0.0018)	(0.0019)	(0.0023)	(0.0023)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	0.0065***	0.0060***	0.0058**	-0.0028	-0.0025
	(0.0022)	(0.0023)	(0.0023)	(0.0031)	(0.0031)
Observations	594	594	594	594	594
R-squared	0.024	0.052	0.064	0.340	0.344
Geographic and climatic controls		x	x	x	x
Regional origins of race FE			x	x	x
Country FE				x	x
Group size					x

Notes: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, distance to the nearest waterway, diurnal temperature range, volatility of temperature and volatility of precipitation. Regional origins of race fixed effects are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

To address this question, we run the same regressions as in Table 6, but with a restricted sample that excludes the New World (Oceania, Western Hemisphere). The remaining sample thus includes only the ethnic groups located in the Old World (Africa, Asia, and Europe). As seen in Table C4, the coefficients of our key variables of interest estimated from the restricted sample are very close to those reported in Table 6.

v. Ethnic discrimination by non-coreligionist rulers

We discussed in section 7.4 the complementarity between the results of country and ethnic group level analysis. In this section we probe deeper into this issue by including additional variables in the analysis that consider all possibilities of the group's historical exposure to non-coreligionist rulers. Specifically, we include in the analysis the case of historical ethnoreligious uniformity with non-coreligionist rulers, which amounts to changing the reference category of our main variables from the baseline of generic historical ethnoreligious uniformity to historical ethnoreligious uniformity *with coreligionist rulers*. This change allows us to examine the effect of ethnic discrimination by non-coreligionist rulers in not just fragmented societies but in homogenous ones as well. As seen in Column 2 of Table C5, the coefficients of our key variables remain about the same, and the coefficient of the new variable is insignificant, which indicate that having a non-coreligionist ruler matters only in fragmented societies.

Table C5
Accounting for Historical Ethnoreligious Uniformity with Non-coreligionist Rulers

VARIABLES	(1) Conflict	(2) Conflict

HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	0.00497**	0.00504**
	(0.00224)	(0.00225)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	-0.00237	-0.00229
	(0.00295)	(0.00297)
HES(0,0): Historical ethnoreligious uniformity with non-coreligionist rulers	0.00597	0.00597
	(0.00697)	(0.00697)
Observations	659	659
R-squared	0.340	0.379
Geographic and climatic controls	x	x
Regional origins of race FE	x	x
Country FE	x	x

Note: The dependent variable is the log of average number of new civil conflict eruptions per year during the period between 1960 and 2017. Geographic and climatic controls include terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, distance to the nearest waterway, diurnal temperature range, volatility of temperature and volatility of precipitation. Regional origins of race fixed effects are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

APPENDIX D
SUMMARY STATISTICS

Table D1
Summary Statistics – Cross Country Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
Average # of new civil conflict per year	150	0.022436	0.0315336	0	0.189655
Average # of new territorial civil conflict per year	150	0.013052	0.0278839	0	0.189655
Average # of new governmental civil conflict per year	150	0.00927	0.0108617	0	0.04
Average # of intense new civil conflict per year	150	0.008508	0.0157366	0	0.076923
Average # of new religious civil conflict per year	150	0.012036	0.027001	0	0.153846
Average # of non-religious new civil conflict per year	150	0.014056	0.0256497	0	0.15
HRS(1,1): Historical religious fragmentation with coreligionist ruler	150	0.323598	0.307657	0	1
HRS(1,0): Historical religious fragmentation with non-coreligionist ruler	150	0.079503	0.157514	0	0.954427
HRS(0,0): Historical religious uniformity with non-coreligionist ruler	150	0.101746	0.149464	0	0.65765
HRS(0,1): Historical religious uniformity with coreligionist ruler	150	0.495153	0.330826	0	1
Absolute latitude	150	0.027426	0.017093	0.001	0.064
Ruggedness	150	0.001309	0.0012375	3.65E-05	0.00674
Mean elevation	150	0.592105	0.5476092	0.000522	2.836526
Range of elevation	150	1.689845	1.379834	0.039583	6.175611
Percent forest	150	0.029892	0.021344	0	0.085381
Mean soil suitability	150	0.000391	0.0002464	3.00E-06	0.000951
Range of soil suitability	150	0.000717	0.0002625	0	0.000999
Percent forest	150	0.004133	0.0122528	0	0.07728
Distance to waterway	150	0.346642	0.4556977	0.014176	2.38558
Island	150	0.08	0.2722021	0	1
Mean temperature	150	0.017935	0.0083867	-0.00494	0.028554
Temperature volatility	150	0.000569	0.0001923	0.000276	0.001075
Mean precipitation	150	1.038623	0.723689	0.03897	3.131886
Precipitation volatility	150	0.130437	0.0872622	0.010015	0.46327
Petroleum reserve	150	0.666667	0.4729838	0	1
Africa	150	0.313333	0.4654026	0	1
Americas	150	0.16	0.3678342	0	1
Europe	150	0.24	0.4285139	0	1
Asia	150	0.266667	0.4436981	0	1
Oceania	150	0.02	0.140469	0	1
Distance to historical trade routes	150	1.718651	2.622458	0.004999	8.900709
Historical conflict	150	0.01374	0.0350092	0	0.35
Population in 1000	150	2108683	9710871	0	1.12E+08
Population in 1500	150	3289882	1.32E+07	4241	1.31E+08
Distance technological frontier in 1000	150	2383.24	1732.402	0	10484.67
Distance technological frontier in 1500	150	2421.384	1803.058	0	10802.18
Distance to religion centers	150	0.041452	0.0376058	2.88E-05	0.143522
Ancestry adjusted genetic diversity	150	0.727288	0.0270614	0.627887	0.774301

State history	150	1.133661	0.7259245	0.123625	2.855963
Duration of human settlement	150	0.000619	0.0004415	8.25E-05	0.001413
Time since Neolithic transition	150	5.039458	2.234184	0.998	9.6
Religious frac.	150	0.42673	0.2308961	0.0028	0.8603
Ethnic frac.	150	0.466469	0.2552468	0.002	0.9302
Ethnolinguistic pol.	150	0.461011	0.2713555	0	0.9778
Colony, United Kingdom	150	0.26	0.4401037	0	1
Colony, France	150	0.186667	0.3909491	0	1
Colony, other powers	150	0.313333	0.4654026	0	1
British legal origin	150	0.253333	0.4363772	0	1
French legal origin	150	0.453333	0.4994852	0	1
Executive constraint	148	4.12403	1.837595	1	7
Democracy	149	0.402476	0.3778314	0	1
Autocracy	149	0.354236	0.3263616	0	1
Population	150	341.3991	1152.859	2.012473	10772.71
GDP per capita	149	6036.323	8710.962	164.057	41360.52
Inequality	144	0.4593265	0.250375	0 .018988	0. 9671901
Group grievance	144	5.637762	2.272673	1.054545	9.941667

Table D2
Summary Statistics – Subnational Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
Average # of new civil conflict per year	659	0.005929	0.015638	0	0.116279
Average # of new territorial civil conflict per year	659	0.003842	0.013383	0	0.116279
Average # of new governmental civil conflict per year	659	0.002086	0.00785	0	0.086207
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	659	0.2732194	0.3681379	0	1
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	659	0.2687676	0.3473002	0	1
Relative size of ethnic group	659	0.191189	0.262853	0.0001	0.98
Mean elevation	659	749.64	720.0827	-76.0714	4729.643
Range of elevation	659	1846.469	1478.28	0	7543
Ruggedness	659	153546.5	147608.2	1007.155	781947
Temperature variation	659	70.17255	33.19033	11.30446	169.4389
Diurnal temperature range	659	469.8636	351.28	26.55059	1912.518
Precipitation variation	659	10.87963	2.713535	4.477012	18.49613
Distance to coast	659	397009.5	436677.1	267.8333	2184173
Mines	659	927.1821	17809.79	0	451957
Mean soil quality	659	1259.865	647.7204	0	2847.457
Range of soil quality	659	1247.747	891.436	0	3454.292
Inequality	583	1.140619	0.8785131	1	19.27195
Rebellion	220	0.541	1.463	0	7
Political grievance	220	1.323	1.139	0	3

APPENDIX E
MISTRUST AS A CHANNEL OF TRANSMISSION

In this appendix, we examine the question of whether mistrust – or lack of social cohesion – served as a mediating channel (Arbatlı et al., 2020). It seems plausible that historical religious fragmentation with coreligionist rulers (or with a non-coreligionist ruler at the ethnic group level, analyzed below) could have diminished trust, and it is this persistent lack of trust that has increased the likelihood of conflict between groups in the modern era. To examine this hypothesis at the country level, we use the variable "generalized interpersonal trust," the standard measure of trust available from the World Values Survey. The results, reported in Table E1, show that the coefficients of *HRS*(1,1) and *HRS*(1,0) are both insignificant, which fails to support the expectation of a mediating role for mistrust at the country level. A possible reason for these results is that generalized trust is merely a noisy measure of intergroup trust and is thus susceptible to attenuation bias.

Table E1
The Impact of Historical Religious Fragmentation and Favoritism on Trust at the Country Level

VARIABLES	(1)
	Generalized trust
HRS(1, 1): Historical religious fragmentation with coreligionist rulers	0.020
	(0.046)
HRS(1, 0): Historical religious fragmentation with non-coreligionist rulers	-0.106
	(0.087)
Observations	96
R-squared	0.704

Note: The dependent variable is the country level average of generalized interpersonal trust from the World Values Survey. Geographic and climatic controls include terrain ruggedness, mean and range of elevation, mean and volatility of temperature, mean and volatility of precipitation, ecological fractionalization, ecological polarization, absolute latitude, distance to the nearest waterway, island nation dummy, percent forest, mean and range of soil suitability, percent desert, petroleum reserve. Continent fixed effects control for Africa, Americas, Asia, Oceania, with Europe being the reference category. Historical controls include ancestry adjusted genetic diversity of a territory, travel cost (walking distance) to religious centers, distance to historical trade routes, distance to the historical regional technological frontiers in the years 1000 and 1500, historical population in 1000 and 1500, state antiquity, time since Neolithic transition, duration of human settlement, and historical conflicts. Robust standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Although data limitations prevent a full-scale analysis of the mediating role of mistrust at the ethnic group level, a limited analysis is possible across ethnicities in Africa by leveraging the measure of interethnic mistrust from the Afrobarometer surveys (Round 3, based on the question "How much do you trust [people] from other ethnic groups?"). The intersection of this dataset with ours yields only 96 observations, a smaller subsample of the overall ethnicity level data used in our baseline analysis. Nevertheless, te results show that the coefficient of *HES*(1,0) is negative and significant at the five percent level, as seen

in Table E2. Despite being based on a limited subset of the data, these results indicate that mistrust mediated the effect of historical religious fragmentation with coreligionist rulers on conflicts at the ethnic group level, at least in Africa. The discrepancy in results between the two levels suggests that the interethnic trust measure is the right one for teasing out the potential relevance of this mechanism (see also Arbatlı et al., 2020),

Table E2
The Impact of Historical Ethnoreligious Fragmentation and Favoritism on Intergroup Trust at the Ethnicity Level

VARIABLES	(1)
	Inter group trust
HES(1,0): Historical ethnoreligious fragmentation with non-coreligionist rulers	-0.2706**
	(0.1241)
HES(1,1): Historical ethnoreligious fragmentation with coreligionist rulers	-0.3307
	(0.2635)
Observations	59
R-squared	0.782

Notes: The dependent variable is a measure of interethnic mistrust from the Afrobarometer survey. Geographic and climatic controls include terrain ruggedness, mines, mean and range of elevation, mean and range of soil suitability, mines, distance to the nearest waterway, diurnal temperature range, volatility of temperature and volatility of precipitation. Regional origins of race fixed effects are binary variables for Americas, East Asia, Europe, Middle East & Northern Africa, Oceania, South Asia, Sub-Saharan Africa. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

APPENDIX F
Historical Religious Structure in the World

Country	*HRS*(0,1): Historical religious uniformity with coreligionist ruler	*HRS*(0,0): Historical religious uniformity with non-coreligionist ruler	*HRS*(1,1): Historical religious fragmentation with coreligionist ruler	*HRS*(1,0): Historical religious fragmentation with non-coreligionist ruler
Afghanistan	0.39	0.04	0.57	0
Albania	0.35	0.21	0.4	0.04
Algeria	0.71	0.06	0.23	0
Angola	0.41	0	0.59	0
Argentina	0.89	0	0.11	0
Armenia	0.04	0.45	0.14	0.37
Australia	0.74	0	0.16	0.09
Austria	0.96	0.04	0	0
Azerbaijan	0.23	0.2	0.41	0.15
Bangladesh	0	0	0.3	0.7
Belarus	0.15	0.36	0.48	0
Belgium	0.96	0.01	0.03	0
Belize	0.5	0.29	0.21	0
Benin	0.9	0	0.1	0
Bhutan	0	0	0.94	0.06
Bolivia	0.73	0	0.27	0
Bosnia and Herzegovina	0.04	0	0.72	0.23
Botswana	0.88	0	0	0.12
Brazil	0.65	0.05	0.3	0
Bulgaria	0.29	0.57	0.12	0.02
Burkina Faso	0	0	0.9	0.1
Myanmar (Burma)	0.19	0.01	0.72	0.09
Burundi	0.9	0.03	0.07	0
Cambodia	0.26	0.02	0.61	0.12
Cameroon	0.4	0.48	0.07	0.05
Canada	0.63	0.08	0.15	0.15
Central African Republic	0	0.28	0.72	0
Chad	0	0.3	0.59	0.1
Chile	0.56	0.17	0.26	0
China	0	0	0.72	0.28
Colombia	0.47	0	0.53	0
Congo, Democratic Republic	0.39	0	0.61	0
Congo, Republic of the	0.68	0.07	0.25	0
Costa Rica	0.64	0	0.36	0
Ivory Coast (Cote d'Ivoire)	0.14	0.2	0.6	0.06

Croatia	0.66	0.2	0.12	0.03
Cuba	0.74	0.04	0.22	0
Czech Republic	0.93	0.04	0.03	0
Denmark	0.97	0	0.03	0
Dominican Republic	0.61	0.06	0.33	0
Ecuador	0.65	0.35	0	0
Egypt	0	0	0.95	0.05
El Salvador	0.64	0	0.36	0
Equatorial Guinea	0.38	0.55	0.08	0
Eritrea	0	0	0.89	0.11
Estonia	0.2	0.18	0.62	0
Ethiopia	0	0	0.99	0.01
Finland	0.47	0.25	0.28	0
France	0.96	0.04	0	0
Gabon	0.82	0.11	0.07	0
Gambia	0.16	0.2	0.13	0.5
Georgia	0.63	0.3	0.07	0
Germany	0.45	0	0.55	0
Ghana	0.9	0.07	0.01	0.02
Greece	0.52	0.48	0	0
Guatemala	0.43	0	0.57	0
Guinea-Bissau	0.87	0	0	0.13
Guinea	0	0.03	0.88	0.09
Guyana	0.53	0.25	0	0.22
Haiti	0.56	0.03	0.41	0
Honduras	0.64	0.17	0.19	0
Hungary	0.45	0	0.52	0.02
India	0.02	0	0.76	0.21
Indonesia	0	0	0.81	0.19
Iran	0.39	0	0.61	0
Iraq	0	0	0.98	0.02
Ireland	0.51	0.32	0.18	0
Israel	0	0.06	0.77	0.17
Italy	1	0	0	0
Japan	0.85	0.03	0.12	0
Jordan	0.95	0.05	0	0
Kazakhstan	0.6	0.16	0.17	0.07
Kenya	0.5	0.44	0	0.06
Korea, South	0	0	0.21	0.79
Korea, North	0.02	0	0.02	0.95
Kuwait	0.43	0	0.5	0.07
Kyrgyzstan	0.77	0.1	0.07	0.07
Laos	0.02	0.26	0.64	0.07

Latvia	0.17	0.46	0.06	0.3
Lebanon	0.1	0.32	0.58	0
Lesotho	0.86	0	0	0.14
Liberia	0.79	0	0.21	0
Libya	0.83	0.17	0	0
Lithuania	0.75	0.05	0	0.2
Luxembourg	0.99	0.01	0	0
Macedonia	0.3	0	0.67	0.03
Madagascar	0.86	0	0.11	0.04
Malawi	0.89	0.06	0	0.05
Malaysia	0.31	0	0.11	0.58
Mali	0	0	0.89	0.1
Mauritania	0.72	0.18	0.1	0
Mexico	0.63	0	0.37	0
Moldova	0.53	0.33	0.14	0
Mongolia	0.07	0.41	0.44	0.08
Morocco	0.89	0.11	0	0
Mozambique	0.41	0.59	0	0
Namibia	0.88	0.03	0.02	0.07
Nepal	0	0	1	0
Netherlands	0.49	0	0.51	0
New Zealand	0.74	0.07	0.16	0.03
Nicaragua	0.6	0	0.4	0
Niger	0	0	0.9	0.1
Nigeria	0.3	0	0.58	0.12
Norway	0.61	0	0.39	0
Oman	0	0.03	0.72	0.25
Pakistan	0	0	0.69	0.31
Panama	0.83	0	0.17	0
Papua New Guinea	0.88	0.03	0	0.09
Paraguay	0.83	0	0.17	0
Peru	0.65	0	0.35	0
Philippines	0.06	0.23	0.71	0.01
Poland	0.24	0.03	0.57	0.15
Portugal	1	0	0	0
Qatar	0.45	0.26	0.17	0.13
Romania	0.27	0.66	0.05	0.02
Russia	0.01	0	0.99	0
Rwanda	0.89	0.04	0.06	0.01
Saudi Arabia	0.94	0.06	0	0
Senegal	0	0.01	0.7	0.29
Sierra Leone	0.77	0.13	0	0.1
Slovakia	0.76	0	0.18	0.06

Slovenia	0.93	0.07	0	0
Somalia	0.88	0.12	0	0
South Africa	0.57	0.18	0.25	0
Spain	0.64	0	0.36	0
Sri Lanka	0.16	0	0.27	0.57
Sudan	0	0	0.91	0.09
Swaziland	0.91	0.04	0	0.05
Sweden	0.89	0.1	0.02	0
Switzerland	0.21	0	0.79	0
Syria	0	0	0.96	0.04
Tajikistan	0.64	0.05	0.16	0.14
Tanzania	0.41	0	0	0.59
Thailand	0.74	0	0.26	0
Togo	0.69	0.28	0	0.03
Tunisia	0.8	0.12	0.09	0
Turkey	0.36	0	0.64	0
Turkmenistan	0.81	0.13	0.07	0
Uganda	0.9	0.05	0	0.05
Ukraine	0.29	0.22	0.49	0
United Arab Emirates	0.08	0.49	0	0.43
United Kingdom	0.45	0	0.55	0
United States	0.47	0	0.53	0
Uruguay	0.81	0	0.19	0
Uzbekistan	0.83	0.16	0.01	0
Venezuela	0.64	0	0.36	0
Vietnam	0.33	0.14	0.53	0
Zambia	0.89	0.1	0	0.01
Zimbabwe	0.89	0.07	0	0.04
Serbia	0.44	0	0.53	0.03

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