THE CLASH OF CIVILIZATIONS: A CLIOMETRIC INVESTIGATION

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Abstract

Ethnic and religious fractionalization have various causal effects on economic growth and development, but their role in internal violent conflicts has been found to be negligible and statistically insignificant. Mostly on this basis, differences of ethnic, religious and cultural identities as the ultimate determinants of violent conflict have often been refuted. Using data on 953 conflicts that took place in 59 countries in Europe, Africa and the Middle East between 1400 and 1900 CE, we investigate the impact of violent conflicts on contemporary ethno-religious fractionalization. Besides a variety of violent confrontations ranging from riots, revolts and power wars between secular sovereigns, the data cover religiously-motivated conflicts. We document that countries in which Muslim against Christian or Sunni versus Shi'a wars unfolded more frequently are more religiously homogenous today. We also show that political fragmentation is positively associated with a history of Christian and Muslim or Muslim versus Muslim confrontations. Hence, cross-country contemporary differences in religious diversity manifest the influence of violent feuds among different religious groups on demographics as well as political borders. This is also why, in contradiction with the Huntington hypothesis, contemporary levels of religious fractionalization fail to explain the propensity of internal conflict.

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1. Introduction

Measures of cultural fractionalization are causal factors according to empirical work in growth and development, and they have been documented to exert a wide range of effects. In various studies, ethno-linguistic differences have been identified as having had detrimental effects on sociopolitical cohesion, thereby eroding the quality of institutions, the commensurate government policies and long-run economic growth.¹ Religious fractionalization, in contrast, exerts a positive if not always statistically significant effect on economic growth, presumably because such fractionalization is an indicator of sociopolitical tolerance and religious freedoms.²

While fractionalization has an indirect influence on economic growth, the standard measures of ethnic or religious fractionalization have a quantitatively and statistically negligible impact on the propensity of violent conflicts within countries.³ It is on this basis that economists and political scientists have often refuted the 'Huntington hypothesis' whereby differences of ethnic, religious and cultural identities are the ultimate determinants of conflict.⁴

Clearly, the observed levels of fractionalization are endogenous in the long run. Thus, the standard approach to estimating the impact of fractionalization on economic outcomes has involved maintaining time horizons that are long enough to isolate the impact of fractionalization on economic outcomes, but are also short enough that measures of fractionalization remain more or less constant. In practice, this strategy has yielded studies that cover two or three decades. Still, the extent to which ethnic, linguistic or religious fractionalization evolves over time is subject to debate, although there is more of a consensus that religious fractionalization is the most malleable and responsive to changes in the external environment.⁵

In this paper, we examine the long-run determinants of contemporary fractionalization across countries along ethnic, linguistic and religious dimensions. We partic-

¹Easterly and Levine (1997), Alesina et al. (1999, 2003), La Porta et al. (1999) and Mauro (1995). For a salient theoretical treatment, see Caselli and Coleman (2006).

²For further details, see Alesina et al. (2003).

 $^{^3}$ Fearon and Laitin (2003), Collier and Hoeffler (2005, 2007), Miguel et al. (2004) and Ray (2005). 4 Huntington (1996).

⁵See, for instance, Alesina et al. (2003). A dissenting view is provided by Campos and Kuzeyev (2007) who argue that ethnic fractionalization evolved more rapidly than linguistic and religious fractionalization in 26 former communist countries over the period between 1989 and 2002.

ularly focus on the impact of violent confrontations over the course of medieval and post-Industrial Revolution history on religious fractionalization. Covering 953 violent confrontations that took place in 59 countries in the Middle East, the Near East, Europe and North Africa over half a millennium between 1400 and 1900 CE, we document that the frequencies and types of conflict influenced contemporary levels of religious fractionalization.

We find that the frequency of wars between Muslims and Christians or among Muslims is positively and significantly associated with current levels of religious homogeneity. An additional violent incident between Muslim and Christian players within the current day borders of a country lowers fractionalization by about 3 to 4 percent, whereas a conflict among the Muslims—in particular, involving the Sunni versus the Shi'a—reduces it by about 4 to 7 percentage points.

These results are robust to the inclusion of the various control variables including population, distance to the equator and geographic region. They are also immune to incorporating a much longer time lag than one century between measurements of fractionalization and conflict incidence. In fact, some of our results are actually strengthened using specifications with the 502 observations that occurred between 1400 and 1600 CE as the basis of our explanatory variables.

These findings demonstrate that the demographic structure of countries in Europe, the Middle East and North Africa still bear the traces of a multitude of 'ecclesiastical and cultural clashes' that occurred throughout history. They specifically suggest that demographically homogenous societies are likely a result of historically persistent conflict that produced atrocities, out-migration or even political fragmentation.⁶ Thus, if modern-day religious homogeneity is a manifestation of historically persistent conflicts and heterogeneity is due to coexistence achieved on the back of a history of violence, then the likelihood of internal strife would be reduced, rendering the relationship between modern-day fractionalization and the propensity of conflict within countries statistically

⁶Compulsory mass population exchanges were another mechanism of ethnic and religious homogenization. In the aftermath of the demise of the Ottoman Empire in 1922, for instance, Greece and Turkey enacted the first large-scale, mutual expulsion of the 20th century. The exchange involved a total of about two million people, some of whom were Turkish nationals of Greek Orthodox heritage and others who were Muslim Greek nationals settled in Greek territory. For further details, see Shaw and Shaw (1976) and Kontogiorgi (2006).

insignificant.

That ethnic, religious and linguistic cleavages of countries could be sources of internal strife is by now part and parcel of the *Huntington hypothesis*: "...conflicts occur between groups from different civilizations within a state and between groups which are...attempting to create new states out of the wreckage of the old." But Huntington was also cognizant of the attenuating effects of conflict in the long run:

"Many countries are divided in that the [ethnic, racial and religious] differences and conflicts among these groups play an important role in the politics of the country. The depth of this division usually varies over time. Deep divisions within a country can lead to massive violence or threaten the country's existence. This latter threat and movements for autonomy or separation are most likely to arise when cultural differences coincide with differences in geographic location. If culture and geography do not coincide, they may be made to coincide through either genocide or forced migration," Huntington (1993, p. 137, 208).

The economics literature has long linked institutional quality as well as sociopolitical and economic stability to various forms of fractionalization. A salient issue is whether religious conflicts have historically exerted a direct impact on institutions and political systems. Alternatively, the impact of violence and religious confrontations could filtered mostly, if not entirely, through fractionalization.⁷ While our analysis confirms that ethnic and linguistic fractionalization have a detrimental impact on institutions, there indeed exists a direct and statistically significant impact of the history of violent conflicts, particularly those of a religious nature, on the quality of political institutions.

Our empirical investigation is based on cross-country estimates. But political borders could well be endogenous with respect to the history of violent confrontations, inducing a source of systematic bias in our estimates. Nevertheless, we document that Muslim versus Christian confrontations and intra-Islam conflicts did exert statistically significant positive effects on political fragmentation as well. In this, we provide some

⁷For the role of social divisions and fractionalization on stability and institutions, see Alesina, Baqir and Easterly (1999), Easterly and Levine (1997), Knack and Keefer (1995).

novel evidence that the history of violent conflicts between religious groups led to religious homogenization by altering not only demographics but also political borders.

The fact that fractionalization is shown to evolve over time and the one- to fourcentury time lags incorporated in the empirical work below ought to be sufficient to isolate the impact of violent conflicts on fractionalization. However, the conventional inclination is to explore the potential channels of adverse impact of fractionalization on economic outcomes via the role of fractionalization in generating conflict. From this perspective, the direction of causality we advocate here runs counter to such traditional approaches. Be that as it may, it is important to acknowledge that, if historical trends did exist over the very long periods we consider, they were in the direction of generating higher fractionalization.⁸ Most importantly, a channel of reverse causality from fractionalization to violent conflict would suggest an attenuation bias, because religious fractionalization tends to instigate more conflicts, not less. But we find that fractionalization is lower in places with a history of Christian versus Muslim conflicts or Sunni versus Shi'a confrontations. Thus, if anything, our empirical estimates would correspond to a lower bound on the effect of religious conflict on fractionalization.

The historical evidence suggests that there were fundamental changes in the degree of religious and ethnic fractionalization of the specific geographies studied herein. As we shall document in Section 3, medieval history reveals that religious pluralism in the Middle East, Europe, the Near East and parts of northern Africa came mostly on the back of violent confrontations, either due to international political and religious rivalries or as a result of domestic religious splinters.⁹

2. Some Related Literature

In addition to the literatures referenced above, the work below relates to four other strands.

The economics of religion is a relatively nascent but burgeoning field. Some of its conventional contributions focus on the supply side, emphasizing how religious norms and denominations evolve (e.g., Barro and McCleary, 2005, Berman, 2000, Ekelund et

⁸Direct supporting evidence for the long-term evolution of fractionalization is hard to come by. For the medium term evolutions of ethnic, religious and linguistic fractionalization following the disintegration of authoritarian socialist regimes, see Campos and Kuzeyev (2007).

 $^{^{9}}$ Iyigun (2008a, b).

al., 1996, Ekelund et al., 2002, Iannaccone, 1992). Others, in contrast, cover the demand side (Glaeser and Sacerdote, 2003, Inglehart and Baker, 2000).

There exists a related cluster of work which sits at the junction of the economics of religion and political economy. It covers some key contributions that explore how adherence to different faiths, such as Judaism, Islam or different denominations of Christianity, might have influenced individual behavior and the evolution of sociopolitical institutions.¹⁰ More generally, this strand falls within the rubric of the economics of culture which advocates the importance of cultural differences in various economic outcomes.¹¹ The work below relates to this strand because it examines the longer-term demographic ramifications of conflicts related to or driven by religious motives.

Religious disagreements have been documented as important instigators of violent conflict. As Richardson (1960) shows, differences of Christianity and Islam, have been causes of wars and that, to a weaker extent, "Christianity incited war between its adherents." Similarly, Wilkinson (1980) claims that "the propensity of any two groups to fight increases as the differences between them (in language, religion, race, and cultural style) increase." The more recent political science literature has supplied the associated view that religion and ethnicity are two fundamental components of 'culture capital', the differences in which that can produce wholesale 'clash of civilizations'.¹²

Finally, we have the political economy literature that incorporates conflict and appropriation into models of production. Haavelmo (1954) was the first to promote the

 $^{^{10}}$ A non-exhaustive list includes Greif (1993, 1994, 2006), Kuran (2004a, 2005), Becker and Woessmann (2009), Botticini and Eckstein (2005, 2007), Glaeser (2005), Lewis (2002), Guiso et al. (2003, 2006), Abramitzky (2008) and Iyigun (2007, 2008a, 2008b).

¹¹See, for example, Landes (1998), Temin (1997), Fernandez et al. (2004), Fernandez (2007).

¹²The culture capital view of religion has been advocated by, among others, Huntington (1996), Landes (1998), Ingelhart and Baker (2000).

A corollary of this view was articulated earlier by the likes of Montesquieu, Kant and Angell. Their 'liberal peace' view emphasized that "mutual economic interdependence could be a conduit of peace." Along these lines, Jha (2008) finds some evidence of the view that differences in the degree to which Hindus and Muslims could provide complementary, non-replicable services in the medieval maritime ports of India explain the extent to which religious tolerance could be sustained over the long term. In particular, he shows that medieval trading ports were 25 percent less likely to experience a religious riot between 1850-1950, two centuries after Europeans eliminated Muslim advantages in trade. In a similar vein, Clingingsmith et al. (2009) document that the Muslim pilgrimage of *Hajj* increases observance of global Islamic practices while decreasing antipathy toward non-Muslims. Their evidence suggests that such changes are due to the interactions among Hajjis from around the world during the Holy Pilgrimage.

notion that appropriation and violent conflict over the ownership of resources should be modeled as an alternative to economic production. Later contributions, such as Hirshleifer (1991), Grossman (1994), Grossman and Kim (1995), Grossman and Iyigun (1995, 1997), Skaperdas (1992, 2005), Alesina and Spolaore (2007) and Hafer (2006), build on Haavelmo's original ideas. And in a more recent but novel specimen of this strand, Spolaore and Wacziarg (2009) argue that populations that are genetically closer are more prone to go to war with each other. The work below sits at the junction of these two strands since it is based on the premise that religious, ethnic or cultural differences could be driven by conflict and war.

The remainder of this paper is organized as follows: In Section 3, we review the historical background. In Section 4, we present our baseline findings and we discuss a variety of issues with identification, robustness and extensions. In Section 5, we discuss the impact of ecclesiastical conflicts on borders and political fragmentation. In Section 6, we conclude.

3. Historical Background

Our measures of religious and ethnic fractionalization do not extend back in time for us to control for the dynamics of fractionalization historically. However, there is somewhat of a consensus that religious fractionalization is more responsive to the external environment than either ethnic or linguistic fractionalization.¹³ In any case, we shall now provide some evidence that the geographic areas in the current domain of the 59 countries in our study were uniformly more homogenous throughout the 16th century—if not until much later—than they are today.

To start with, consider Europe at the turn of the 15th century. In the words of Tilly (1992, pp. 4, 5), "The [European] continent... did have some potential bases of unity... Religion, language, and the residues of the Roman occupation probably made the European population more culturally homogeneous than any other comparable world area outside of China."

Indeed, Christianity had been split for close to three and a half centuries along its eastern Orthodox and Roman Catholic denominations by the early-15th century. And the Nestorian as well as the Coptic Churches had already split from Rome close to a

 $^{^{13}}$ Alesina et al. (2003).

millennium prior to 1400 CE. However, there was little if any geographic overlap in the domain of each of these Christian denominations at the turn of the 15th century. Moreover, while the precedents for the Protestant Reformation had been set in western, northern and central Europe with the Cathar/Albigensian uprisings in 1177 CE as well as the Waldensian movement in the same year, Europe west of the Balkan peninsula was a homogenous ecclesiastical block within the domain—and under the monopoly—of the Roman Catholic Church. (see Moore, 1994, and Rhodes, 2005). In England, it was not until 1534 that splinters began in earnest with the Church of England separating from the Roman Catholic Church during the reign of Henry VIII.¹⁴

In the east, the Ottoman empire had made significant territorial gains in the late 14th century, yielding the geographic areas within what is now Bulgaria, Romania and most of eastern Greece to Ottoman control. The empire followed the traditional Islamic policy of religious tolerance toward the other 'people of the book'. Jews, Christians and other believers of the one true God had the right of protection of their lives, properties and religious freedoms provided that they accepted Ottoman rule and paid the special head tax, *cizye*. Hence, conversions to Islam among the Balkan Christians seem to have been limited, with only some small minority groups, such as the Bogomils of Bosnia, who had been persecuted under Christian rule, having chosen to do so (Shaw, 1976, p. 19). Nor was there any significant amount of resettlement by the Ottoman Muslims within the newly-acquired eastern European territories. While the Balkans are currently one of the most religiously fractionalized geographic regions covered in our study, there is much to suggest that this fractionalization was fairly low and bounded by our contemporary standards throughout the 16th and the 17th centuries.¹⁵

At the turn of the 16th century, the Iberian peninsula was a most homogenous Catholic domain. That was on account of the Spanish Inquisition which Monarchs

¹⁴MacCulloch (2003, pp. 193, 194).

¹⁵Along these lines, there is some consensus that the Ottomans' deliberate policies of low taxes and religious toleration generally helped to augment religious and ethnic diversity of the Balkans and eastern Europe (Kafadar, 1996, Shaw, 1976, and Karpat, 1974, Faroqhi, 2004, pp. 37 and 64).

It is well known that the Ottomans were directly involved in aiding the relocation of Huguenots from France to Moldavia, then an Ottoman territory. The Ottomans also indirectly supported the Serbian Orthodox immigrants against the Hapsburgs in some Balkan protectorates. On occasion, the Ottomans also engaged in a combination of forced population relocations and property incentives to relocate ethnic or religious minorities within the empire in attempts to economically revitalize certain regions (Shaw, 1976, p.59).

Isabella I of Castile and Ferdinand II of Aragon had begun in 1478 to purge the peninsula of all religions except Roman Catholicism. While the inquisition did not officially end until 1834 when Isabel II abolished it, the Iberian Muslims and Jews as well as Christians of rival denominations had relocated out entirely by the early-16th century.¹⁶

In this context, one also needs to bear in mind that fractionalization data are driven, to some significant extent, by the political regimes in effect. In more repressive regimes, the measured fractionalization indicators are more likely to be biased downward.¹⁷ The fact that the time period and geographic areas we investigate were unambiguously much less democratic and typically much more repressive prior to 1900, and most certainly before 1600, also suggests more observed homogeneity back in time.

4. The Empirical Analysis

4.1. Data and Descriptive Statistics

Our primary data source is the *Conflict Catalog* by Brecke (1999). It is a comprehensive dataset on violent conflicts in all regions of the world between 1400 CE and the present. It contains a listing of all recorded *violent* conflicts with a Richardson's magnitude 1.5 or higher that occurred on five continents.¹⁸ These data are still under construction, but they are virtually complete for Europe, North Africa and the Near East. We rely on this portion.

For each conflict recorded in the catalog, the primary information covers (i) the number and identities of the parties involved in the conflict; (ii) the common name for the confrontation (if it exists); and (iii) the date of the conflict. On the basis of these data, there also exists derivative information on the duration of the conflict and the number of fatalities. But the latter are only available for less than a third of the sample.

¹⁶Landes (1998, p. 139).

¹⁷A salient example in this regard is the adoption of Protestantism versus Catholicism by the Prussian regional Diets in the 16th century, with the citizenry of each region having been forced to accept the ecclesiastical choice made by their rulers at the time (Becker and Woessmann, 2009).

¹⁸Brecke uses the definition of violent conflicts supplied by Cioffi-Revilla (1996): "An occurrence of purposive and lethal violence among 2+ social groups pursuing conflicting political goals that results in fatalities, with at least one belligerent group organized under the command of authoritative leadership. The state does not have to be an actor. Data can include massacres of unarmed civilians or territorial conflicts between warlords."

Richardson's index corresponds to 32 or more deaths ($\log 32 = 1.5$) and the five continents covered are all those that are inhabitable (i.e., Europe, Asia, the Americas, Australia, and Africa).

We worked with two cuts of these data: one, which covered the five centuries between 1400 and 1900 CE, and another that spanned the two hundred years between 1400 and 1600 CE. The broader, half a millennium cut yielded a total of 953 conflicts, while the narrower dataset resulted in 502 observations. We then identified the geographic locations of each of these conflicts and assigned it to one of the 59 countries that exist today in Europe, the Middle East, the Near East or North Africa.¹⁹ For some other peripheral data, such as population measures, polity and democracy scores and city distance calculations, we relied on McEvedy and Jones (1978), the Polity IV Project and City Distance Tool by Geobytes.²⁰

We augmented these data with *religious fractionalization* measures obtained from both McCleary and Barro (2006) and Alesina et al. (2003).²¹ As we shall expound upon in subsection 4.3, these two sets of religious fractionalization data enabled us to not only examine the robustness of our key findings to the use of different sources, but also pursue empirical specifications that slightly differed by country and time-period coverage. In either case, fractionalization is measured as one minus the Herfindahl index of religious group shares, and they reflect the probability that two randomly selected individuals from a population belong to different groups. In particular,

$$FRAC_{ij} = 1 - \sum_{j=1}^{N} s_{ij}^2$$
 (1.a)

where s_{ij} represents the share of religious group j (j = 1, 2, ..., N) in country i.

Recent literature argues that measures of religious polarization capture the propensity for potential religious strife better than religious fractionalization measures.²² But it

¹⁹To be specific, we first identified the theater(s) of conflict for each of the observations in the Brecke dataset using multiple sources, including, but not limited to *Oxford Atlas of World History* (2002), the *Rand McNally Historical Atlas of the World* (2005), the *Encyclopedia Britannica*, Levy (1983) and Shaw (1976). We then identified the longitude and latitude of each of the battle or conflict locations. We used that information to tally the different kinds of conflicts and violent confrontations that occurred between 1400 and 1900 CE within the borders of the 59 countries in our sample.

²⁰The Polity IV data can be accessed at http://www.systemicpeace.org/polity/polity4.htm and the city distance calculator can be found at http://www.geobytes.com/CityDistanceTool.htm.

 $^{^{21}}$ In the subordinate cases where we tested whether the long-term history of conflicts impacted *ethnic* or *linguistic* fractionalization in the same manner of religious fractionalization, we made sole use of the Alesina et al. data.

²²Montalvo and Reynal-Querol (2005a, b), Esteban and Ray (2010).

is not clear how the long-term patterns of conflict might have come to bear on the extent to which countries are fractionalized as opposed to polarized. Thus, in order to test if conflicts influenced fractionalization differently than polarization, we also calculated measures of *religious polarization* using the McCleary-Barro data:

$$POL_{ij} = 1 - \sum_{j=1}^{N} \frac{n_{ij}}{N_i} \left(\frac{.5 - n_{ij}/N_i}{.5}\right)^2,$$
 (1.b)

where n_{ij} is the number of individuals that adhere to religion j in country i and N_i is country i's population. By construction, polarization attains its peak for a society that is equally split between two dominant religious groups, whereas fractionalization is highest when the religious landscape is fragmented among many different religions and their denominations.

Our final step involved classifying conflicts by the actors involved. If a violent conflict pitted a predominantly Muslim society against a Christian one (i.e., the Ottomans versus the Hapsburgs at various occasions during the 16th and 17th centuries or the Russo-Circassian wars between 1832 and 1864), we labeled that conflict as one involving Muslims against Christians; if it involved coreligionist groups (such as the Napoleonic wars in Europe or Russia in the 19th century or the Ottomans against the Safavids or Memluks in the 16th century), then we classified it as Christian versus Christian or Muslim against Muslim. For these latter two variables, we further classified conflicts according to their inter-denominational nature. Specifically, for Muslim versus Muslim confrontations, we identified those that pitted the Shi'a against the Sunni. And, within Christianity, we categorized conflicts between eastern Orthodox groups and Catholics as well as those that involved Orthodoxes versus Protestants. Finally, we also tallied confrontations which explicitly had a religious dimension (such as the various Protestant or Huguenot revolts against the Catholic establishment in Europe during the 14th, 15th or 16th centuries and various Jewish pogroms that occurred in Europe dating back to the 11th century).²³

Table 1 presents some descriptive statistics. Countries that are most religiously fractionalized today include the Eastern European and Balkan countries, such as Bosnia

 $^{^{23}}$ We have a record of five pogroms that took place in four countries over our time span, which isn't enough to include them as relatively reliable independent controls in our analysis.

& Herzegovina, Slovakia, Czech Republic, Hungary and Moldova. This is more or less the set of countries that lay in the buffer zone between Christianity and Islam, as defined by Huntington.²⁴ There are other highly fractionalized countries located in western and central Europe also, such as the Netherlands, Switzerland, Germany and the United Kingdom, as well as others in the Middle East, such as Jordan and Lebanon. By contrast, those countries that are religiously most homogenous typically have Muslim majorities, such as Algeria, Tunisia, Turkey and Yemen.

While there are *a priori* reasons to think that the interactions of people with different ethnic or religious backgrounds might have been more frequent in the buffer zones, they do not necessarily suggest the higher frequency of interactions produced a net impact on fractionalization. On the one hand, it could have been that minorities were either oppressed or forced to convert with more frequency by societies which subscribed to majority religions in the buffer zones. This would have led to a forced conversion to the monotheistic religion or to a syncretized form of religion (sects) that were marginally tolerated by the dominant faith. Such dynamics would have produced more religious homogeneity in the buffer zones. On the other hand, buffer zones could have been areas with more religious porousness, especially if the more intense nature of ecclesiastical competition in the buffers enabled more proselytizing and voluntary conversions. In that case, religious diversity would have been higher. For these reasons, we acknowledge—and, in what follows, explicitly control for—the special nature of the buffer zones in the dynamics of religious fractionalization.

Figure 1 shows the conflicts in our dataset by century and geographic location. In terms of the *overall* patterns of warfare and conflict, we see that current-day Austria, France, Germany, Italy, Poland, Russia, Spain and Turkey were the theaters of conflict most often. Adjusting for country size, some of those countries remain high on the list, although the incidence of violent conflicts in Germany, Russia and Turkey adjusted for their geographic size is relatively low.

²⁴Huntington (1996, p.159) defined this zone by a North-South axis that splits the European continent from Asia, running "along what are now the borders between Finland and Russia and the Baltic states (Estonia, Latvia, Lithuania) and Russia, through western Belarus, through Ukraine separating the Uniate west from the Orthodox east, through Romania between Transylvania with its Catholic Hungarian population and the rest of the country, and through former Yugoslavia along the border separating Slovenia and Croatia from the other republics. In the Balkans, of course, this line coincides with the historical division between the Austria-Hungarian and Ottoman empires."

Figures 2 through 4 show the frequencies of conflicts by country involving Christians only, Muslims only and Christians versus Muslims, respectively. As one might expect, Christian versus Christian conflicts are primarily concentrated in European countries and Russia, while there were relatively fewer such conflicts in Eastern and Northern Europe. By contrast, conflicts that involved Muslim parties on both sides were, for the most part, Anatolian, Middle Eastern or Arabian affairs. As for Christian versus Muslim confrontations, these were primarily Eastern European, Balkan, Russian and Iberian peninsula occurrences, with most of the Iberian cases being front loaded in the 15th century.

In terms of the breakdown of the type of conflicts by country, our dataset contains 31 countries (out of 59) where at least one Christian versus Muslim confrontation took place, 11 countries in which at least one Muslim versus Muslim incidence was recorded, and 31 countries where at least one Christian versus Christian conflict occurred. In 16 countries, we show a record of at least one Christian versus Christian conflict and Muslim versus Christian confrontation. In 8 countries, there was at least one Christian versus Muslim incident. And we have only two countries—Georgia and Russia—where all three types of violent confrontations were observed. Of the 59 countries in the sample, eastern European and Balkan countries, such as Albania, Greece, Austria, Bulgaria, Turkey and Ukraine, saw the most Muslim versus Christian conflicts. But in Spain and Russia too there were relatively more conflicts that pitted Muslim against Christian players. And in six countries in the sample, including France, Germany and Switzerland, there were violent confrontations between Protestants and Catholics.

Figure 5 depicts religious fractionalization by country. Here we see that Northern Europe, Great Britain and Eastern Europe are host to highly fractionalized countries, whereas North Africa, the Arabian peninsula and the Middle East—with the exceptions of Iraq, Syria and Lebanon—include some of the least religiously fractionalized societies.

[Figures 1 through 5 about here.]

Now some salient descriptive statistics. First, note that countries are more religiously fractionalized than they are ethnically or linguistically. But there is also a higher level of cross-country variance in religious fractionalization. The correlation of the Alesina measures with McCleary and Barro's overall religious fractionalization data is quite high but not perfect at .81. There were close to 16.2 total conflicts within each country in the sample over the 500-year interval between 1400 and 1900 CE. Among these conflicts, there were on average 3 violent confrontations per country that involved Muslim and Christian sides, about 11 of which pitted Christians against Christians and 1.2 in which both sides were Muslim. Christian versus Muslim wars lasted longer on average than those between Christians, but both Christian-Muslim and intra-Christianity feuds lasted much longer than those that involved Muslims only. Conditional on the fact that there was at least one such type of confrontation within a given country between 1400 and 1900 CE, a typical Christian versus Muslim confrontation lasted about three years, whereas intra-Christianity feuds typically took about two and half years and intra-Islam conflicts lasted about a year and three months.

Using our longer time span covering the period between 1400 and 1900 CE, the average year of Christian-Muslim conflicts was 1627, with Muslim versus Muslim wars occurring on average around the year 1693 and intra-Christianity confrontations being dated around the year 1637 CE. By contrast, when we restrict the time coverage to the two-century interval between 1400 and 1600 CE, those dates are respectively revised as 1457, 1589 and 1514 CE.

There is positive but relatively low correlation between religious fractionalization and the two other fractionalization measures, although that between religious and linguistic fractionalization is the higher of the two measures. By contrast, the correlation between ethnic and linguistic fractionalization is positive but much higher. Religious fractionalization exhibits a negative and relatively low correlation with intra-Islam confrontations and to a weaker extent with Christian versus Muslim conflicts, but it shows a positive and relatively strong correlation with Christian versus Christian feuds. The correlation of religious fractionalization with the duration of different kinds of conflict varies too, with the correlation of religious fractionalization and the duration of Muslim versus Christian and intra-Islam conflicts being the two that are slightly negative. As shown in the second panel of Table 1, the geographic correlations of religious fractionalization confirm that the Balkans and Eastern Europe are highly fractionalized whereas the Middle East is not. In our final panel in Table 1, we document that religious fractionalization rises with distance from the equator and ethnic fractionalization falls with it, while linguistic fractionalization is weakly related to equatorial distance.

[Table 1 about here.]

4.2. Main Results

In our baseline estimates, we cover the period between 1400 and 1900 CE to estimate the following regression:

$$FRAC_{ij} = \lambda_0 + \lambda_1 CHRISTIANMUSLIM_i$$

$$(2)$$

$$\lambda_2 CHRISTIANCHRISTIAN_i + \lambda_3 MUSLIMUSLIM_i + \lambda_4 X_i + \varepsilon_i,$$

where $FRAC_i$ is a measure of religious fractionalization as defined by (1.a); CHRISTIAN- $MUSLIM_i$ is the count of violent confrontations between Muslims and Christians which took place in country *i* over the relevant time span; $CHRISTIAN - CHRISTIAN_i$ is the number of violent conflicts among Christian parties that occurred in country *i* between 1400 CE to 1900 CE; and $MUSLIMUSLIM_i$ is the confrontations among Muslims in country *i* during the same period.

In our most parsimonious empirical specifications, the set of control variables X_i includes nine geographic dummy variables, WESTERNEU, CENTRALEU, EASTERN– EU, NORTHERNEU, BALKANS, AFRICA, ASIA, MIDEAST and ISLAND. As we already mentioned, certain areas of Europe tend to be more homogeneous than others, hence the addition of geographic dummies controls for regional differences.

In more comprehensive estimates, we also include in X_i population density of i in 1994, *POPDENSITY*; the distance from the equator of country i's capital, *EQUATOR*; a dummy for whether or not i is landlocked, *LANDLOCK*; country i's land area in km^2 , *LANDAREA*; the population density estimates for 1000 CE and 1500 CE, *POPDEN*1000 and *POPDEN*1500, respectively; the distance of country i's capital from the three ecclesiastical centers of Rome, Jerusalem and Mecca, *ROME*, *JERUSA* – *LEM*, and *MECCA*; and dummies for whether a majority of the population was Christian or Muslim in 1994, *CHRISTIANMAJOR* and *MUSLIMAJOR*. Appendix A lists and defines our key variables.

Table 2.A displays results from six regressions that employ religious fractionalization as the dependent variable.²⁵ Column (1) shows results from the most parsimonious of regressions, with controls only for geographic region. Column (2) adds LANDAREA, a dummy for whether the country is landlocked, LANDLOCK, the distance from the equator of each country *i*' capital, EQUATOR, and current population density, POPDENSITY.²⁶ Column (3) then includes indicators of Muslim or Christian majority, CHRISTIANMAJOR and MUSLIMAJOR.²⁷ Column (4) adds the historical population density estimates for 1000 CE and 1500 CE, POPDEN1000and POPDEN1500. Column (5) incorporates three variables of distance to major religious centers of Mecca, Rome and Jerusalem. And column (6) replicates the estimates in (5), except that it excludes the contemporary control variables, LANDAREA, POPDENISTY, EQUATOR and LANDLOCK.

In all six specifications reported in Table 2.A, religious fractionalization in 1994 depends negatively on the *frequency* of Muslim versus Christian wars between 1400 and 1900 CE. In two of those estimates, *CHRISTIANMUSLIM* is significant at the one percent level and, in two others, it enters with significance levels of five and ten percent. These results buoy the thesis that the long-run incidence and patterns of religious conflicts—in this case, those between Muslims and Christians—did impact countries' contemporaneous extent of religious fractionalization. The incidence of Muslim versus Muslim conflicts in each country between the 15th and 19th centuries is even a stronger predictor of its contemporaneous level of religious fractionalization. *MUSLIMUSLIM*

²⁵In all tables, we report errors clustered at the level of five geographic regions: Europe, Middle East, North Africa, Asia and island countries (which includes Cyprus, Malta and the United Kingdom). Clustering errors more finely at the level of our nine geographic dummies produce somewhat weaker but roughly similar results, and heteroskedasticity-corrected standard errors yield much stronger results.

 $^{^{26}}$ It is important to control for country size to the extent that country formation is endogenous and causality runs from violent confrontations to country size, which in turn affects our measures of fractionalization. Put differently, to the extent that the impact of conflicts on fractionalization arises from endogenous country formation, controlling for *LANDAREA* helps to limit omitted variable biases. We shall elaborate more on this in section 5.

²⁷Besides some cultural or political channels through which the majority religion could come to bear on fractionalization, bear in mind that controlling for Muslim- or Christian-majority populations would account for the fact that the number of denominations within Christianity and Islam differ.

attains statistical significance in all six specifications, with two regressions yielding coefficients that are significant at the one percent level and four others with five percent statistical significance.²⁸

The role of historical conflicts between Muslims and Christians and among Muslims themselves in influencing modern-era fractionalization is quite large. In the simplest regression in Table 2.A, for instance, one more violent incident in which Muslims fought Christians is associated with about three and a half percent less religious fractionalization, or a generally more homogenous religious community roughly some 400 years later.²⁹ The impact of Christian versus Muslim conflicts remains large in all specifications and reaches its peak in the final two regressions in columns (5) and (6). The influence of Muslim versus Muslim violent confrontations on religious fractionalization is even larger with one more incident of conflict among Muslims lowering a country's religious fractionalization roughly between four to seven percentage points.

These baseline results show a pattern that will remain at the fore the rest of the way which raises the question: why did Muslim versus Christian conflicts and Muslim against Muslim confrontations have qualitatively similar effects on religious fractionalization, whereas Christian versus Christian conflicts had no discernible long-run effects? One plausible conjecture is that the types of conflict in question differ from one another in the extent to which the underlying sources of conflict have been mitigated or resolved in the course of time—however superficially or fundamentally that may be.

In particular, the process through which the Protestant and Catholic Christian denominations came to terms with their underlying differences was arduous and prolonged. The seeds of this confrontation lay in centuries past and the 'heretical' movements of Lollardy, Huguenots and Hussites. The confrontation spanned more than 130 years between the start of the Reformation in 1517 and its culmination with the Treaty of Westphalia signed at the end of the Thirty Years War in 1648. When this fundamental ecclesiastical disagreement was eventually resolved, however, religious pluralism started to become the accepted European norm.

²⁸The coefficients not shown typically are statistically insignificant, with occasionally alternating signs across the different empirical specifications.

²⁹The coefficient of MUSLIMCHRISTIAN in the column (1) estimate of Table 3 is -.0125. Given that the average fractionalization rate is .359 in our sample, this corresponds to a 3.5 percent lower fractionalization rate due to one extra conflict between Muslims and Christians.

In contrast, one ought to bear in mind that the era that we are investigating coincides with a period when both Christianity and Islam had been established long ago, but the competition between them had once again intensified with the Ottomans' domination of eastern Europe in the 15th and 16th centuries and the *Spanish Reconquista* in 1492. The One God-One True Religion duality inherent in all three major monotheisms has historically been an important factor in sustaining violent encounters between Muslims and Christians. And, while the Sunni-Shi'a rift within Islam is denominational in nature, it manifests a fundamental ecclesiastical division that dates back to three decades following the death of Prophet Mohammed.³⁰

Returning back to our results, we see that, with the exception of some of the geographic dummy variables that come in statistically significant, although not robustly to changes of empirical specification, only a few of the right-hand side variables, which we singled out above, have explanatory power. In particular, contemporary levels of population density exert a negative and significant effect on fractionalization when it is included without historical density measures, but it turns statistically insignificant once we control for population density in 1500 CE. In terms of the overall strength of our empirical specifications, note that the fit of the regressions, even of the baseline version, is quite high as indicated by the R^2 measures.

Tables 2.B and 2.C employ the same specifications shown in the previous table but with ethnic and linguistic fractionalization, respectively, as the dependent variables. As shown in Table 2.B, neither of our three key explanatory variables, *CHRISTIANMUS*

³⁰Prophet Mohammed had no successors and, after his death in 632 CE, there were disagreements among his followers regarding who should assume the title of *Caliph*, the leader of the Islamic Ummah or global Islamic nation. Some of Mohammed's followers decided that his father-in-law Abu Bakr should accede to the Caliphate who was to be followed by others to be chosen by the spiritual leaders of Islam. However, to some of Mohammed's other followers, Muhammad wanted his cousin Ali ibn Ali Talib to succeed the first Caliph, Abu Bakr. In spite of that, both the *Sunni* and the *Shi'a*, as the followers of Abu Bakr and Ali ibn Ali Talib are now respectively called, recognized the reigns of the first four caliphs as legitimate. As a result, the Shi'a-Sunni split remained subdued throughout the reigns of the first four caliphs.

After *rashidun*, when first four caliphs considered legitimate by both the Sunni and the Shi'a reigned supreme, Ali and his inner circle began to offer an alternative rule to the Sunni caliphs. The Sunni, under Mohammed's widower Ayşa's leadership, dissented. Five years later, in 661 CE, Ali and some of his followers were massacred in the city of Kufa in what is now central Iraq. Still, the Shi'a continued to recognize the legitimacy of Caliphs from Ali's bloodline. And when Ali's bloodline died out after the twelfth Caliph, the Shi'a declared that he would eventually return as their Messiah. For further details, see Iyigun (in progress).

– LIM, CHRISTIANCHRISTIAN, MUSLIMUSLIM, reflects consistent and statistically significant effects on ethnic fractionalization. But, as listed in Table 2.C, the history of intra-religious confrontations typically do exert significant effects on linguistic fractionalization, with MUSLIMUSLIM showing positive and statistically significant impact on linguistic fractionalization and CHRISTIANCHRISTIAN typically exhibiting negative and significant coefficients in Table 2.C. Little else provides an evidently strong predictor of either ethnic or linguistic fractionalization; the exceptions include some regional dummies. We will not elaborate much on these results, other than to highlight the fact that CHRISTIANMUSLIM has a negative and significant role in explaining religious fractionalization only, and emphasizing the negligible and insignificant influence of our conflict measures on ethnic fractures. All in all, the weaker power of our set of right-hand side variables in explaining either ethnic or linguistic fractionalization vis-a-vis religious fractionalization is also manifested in the fit of the specifications as summarized by the R^2 measures in Tables 2.B and 2.C.

[Tables 2.A, 2.B and 2.C about here.]

Recall that our data include information on the duration as well as timing of conflicts. Given that we find some systematic effects of *CHRISTIANMUSLIM* and *MUSLIMUSLIM* on the extent of cross-country differences of religious fractionalization, it is plausible that the timing and duration of these types of conflicts came to bear on religious fractionalization too. With this possibility in mind, we estimated

$$FRAC_{ij} = \lambda_0 + \lambda_1 CHRISTIANMUSLIM_i + \lambda_2 CHRISTIANCHRISTIAN_i$$

$$+ \lambda_{3} MUSLIMUSLIM_{i} + \sum_{l=1}^{3} \gamma_{l} CONFLICTDUM_{li} + \sum_{l=1}^{3} \eta_{l} DURATION_{li}$$

$$+ \sum_{i=1}^{3} \gamma_{l} YEAR_{li} + \lambda_{4} X_{i} + \varepsilon_{i},$$

$$(3)$$

where $FRAC_i$ is one of our standard left-hand side variables defined above, and CHRIS

 $\overline{l=1}$

 $-TIANMUSLIM_i$, $CHRISTIANCHRISTIAN_i$, $MUSLIMUSLIM_i$ as well as the various control variables in X_i carry over from the previous specifications.

In equation (3), $DURATION_{li}$ and $YEAR_{li}$ respectively denote the average duration and year of our three key explanatory variables. And CONFLICTDUM represents three dummies for whether $CHRISTIANMUSLIM_i$, $CHRISTIANCHRISTIAN_i$ and $MUSLIMUSLIM_i$ are strictly positive.

Table 3 presents our key findings. We show six specifications that include both our duration measures and year variables. As can be seen, the inclusion of these additional variables somewhat weakens our results for *CRISTIANMUSLIM*, but it has no effect on those for *MUSLIMUSLIM*: the latter continues to be significant and negative in all six specifications and, although *CHRISTIANMUSLIM* still enters negatively in all regressions, it attains significance at the one and five percent confidence levels in only two of those. Interestingly, of the additional controls we deploy in these specifications, only the average years of conflict among Muslims, *YEARMM*, reflects significant negative effects on religious fractionalization. That is, conditional on the fact that at least one Muslim versus Muslim conflict occurred within the borders of a country, the more recent these conflicts were on average, the larger their depressing role in religious fractionalization.

[Table 3 about here.]

Given our baseline findings, an interesting question involves the extent to which denominational differences within Christianity and Islam influence the result that MUS– LIMMUSLIM plays a depressing role in religious fractionalization, while CHRIS– TIANCHRISTIAN does not. By disaggregating the intra-religious conflicts at the denominational level, we can explore this issue a bit further. In particular, instead of controlling for CHRISTIANCHRISTIAN and MUSLIMUSLIM, we identify the frequency of intra-Christian conflicts as those between Catholic and Orthodox parties, Catholics versus Protestants or Protestants against Orthodox rivals. Similarly, we tally up the frequency of conflicts that only involved the Sunni against the Shi'a.

Our main results are shown in Table 4. The key finding is that *CHRISTIANMUS* – *LIM* continues to influence religious fractionalization negatively and significantly in all specifications, with roughly similar quantitative effects that range from 2 to 4 percent

reduction in religious fractionalization due to one extra Christian versus Muslim confrontation. Interestingly, however, the impact of *SHIASUNNI* is not only negative and statistically significant, but also anywhere from two to four times as large in magnitude as the impact of *MUSLIMUSLIM* in Table 2.A. In contrast, none of the denominational intra-Christian conflict variables exerts statistically significant and robust effects on religious fractionalization. This suggest that neither intra- nor inter-denominational Christian conflicts had an influence on religious fractionalization. While the same can be said of intra-denominational Muslim confrontations, it is the inter-denominational, Shi'a versus Sunni conflicts that primarily account for the impact of *MUSLIMUSLIM* in Tables 2 and 3.

[Table 4 about here.]

4.3. Identification, Robustness and Alternative Specifications

Now we can turn to issues of robustness, identification and extensions.

To start with, recall that we have an alternative source of religious fragmentation data in McCleary and Barro (2006), on the basis of which we constructed alternative religious fractionalization measures. Using these data, we could replicate the exercises shown in Table 2.A. While the McCleary-Barro data are highly correlated with the Alesina et al. (2003) measures we originally employed, they are not perfectly so.³¹ Thus, it would be useful to check the extent to which our results apply more generally when these alternative religious fractionalization measures are employed.

Table 5.A revisits Table 2.A, this time utilizing the religious fractionalization measures constructed with the McCleary-Barro religious adherence shares within each country in the year 2000. As a comparison of the two tables reveals, the results we get are very similar across the two measures. Muslim versus Christian conflicts as well as intra-Islam ones still show significant and negative effects on the extent to which countries are religiously fractionalized in 2000. Perhaps the main difference of these results from those reported in Table 2.A stems from the fact that the coefficient magnitudes of both

³¹As shown in the first panel of Table 1, the correlation of the Alesina measures with McCleary and Barro's overall religious fractionalization data is .81. And the correlation of the Alesina data with McCleary and Barro's measures that cover religious fractionalization among only the adherents equals .77.

CHRISTIANMUSLIM and MUSLIMMUSLIM are typically slightly smaller than those in Table 2.A.

Since the McCleary and Barro data also contain information on religious adherence at the turn of the 20th century for all the 59 countries in our sample, they allow us to explore if the history of conflicts between 1400 and 1900 CE had its primary effects on religious fragmentation in the 20th century or earlier. In the first panel of Table 1 we have some summary statistics for our religious fractionalization data in 1900 CE. And in Table 5.B we report results with religious fractionalization as our dependent variable. As shown, the impact of conflict types and intensity over the period between 1400 and 1900 CE has weak if any impact on the extent to which countries were religiously fractionalized in 1900. Neither CHRISTIANMUSLIM nor MUSLIMUSLIM shows statistically significant effects on religious fractionalization, save for one out of six specifications each for these key explanatory variables.³² In this, we have some evidence that the history of conflicts came to bear on religious fractionalization mostly in the 20th century. Along these lines, MacMillan (2001) documents the extent to which political borders were redrawn and radical demographic shifts occurred—both within and across borders—in the aftermath of the First World War. We shall revisit and address this issue in Section 5 below.

Now, consider the fact that we are also able to calculate *religious polarization* measures on the basis of the McCleary and Barro data. With that, we can regress religious polarization on our standard explanatory variables, as reported in Table 5.C. Interestingly, we see that Muslim against Christian conflicts mostly explain religious fractionalization, whereas intra-Islam feuds have as strong a dampening effect on polarization as they do on fractionalization. One can thus conjecture that inter-religious confrontations between Muslims and Christians produced more homogenous countries historically, lowering even the likelihood of countries with two large—and potentially rival—ecclesiastical groups. But this is clearly not the case for intra-Islam feuds.

[Tables 5.A, 5.B and 5.C about here.]

 $^{^{32}}$ A relevant question involves the extent to which conflicts over the earlier period of 1400 to 1600 CE had a bearing on religious fractionalization in 1900. Our results were very much in line with those using conflicts over the entire period of 1400 to 1900 CE, which is why we have chosen not to report them here.

Next, there is rightly a question of causality. In this, we are encouraged by two factors. First, numerous sources discussed herein suggest that the European continent presented relatively low levels of fractionalization in the medieval period and in the run up to the start of our sample period in the 15th century. Moreover, the addition of regional controls ought to account for outliers such as the Balkans and the Iberian Peninsula before 1492. Second, and more importantly, our central findings show consistent negative effects of *CHRISTIANMUSLIM*, *MUSLIMUSLIM* and *SHIASUNNI* on religious fractionalization. Channels of reverse causality from religious and ethnic fractionalization to violent conflicts is always positive, with religious fractionalization leading to more frequent conflicts. But we find that fractionalization is lower is places with a history of Christian on Muslim conflicts or Sunni versus Shi'a confrontations. Accordingly, if anything, our empirical estimates correspond to a lower bound on the effect of religious conflict on fractionalization.

All the same, we decided to rerun our empirical tests using a three hundred-year time lag between our fractionalization observations and the conflict data. In particular, instead of tracking the patterns, types and attributes of violent confrontations over the half millennium between 1400 to 1900 CE, we generated an alternative variant of the conflict variables which is based on data covering the two centuries between 1400 and 1600 CE. This yielded 502 total conflicts in the 59 countries in our sample—instead of the 953 over the 500-year interval.³³

Tables 6.A, 6.B, and 6.C provide the results derived using this new sample but otherwise replicating the empirical specifications shown in Tables 2.A, 2.B and 2.C, respectively. By incorporating a longer time lag, we see in Table 6.A that the effects of wars on religious fractionalization are very much in line with those produced using the entire period 1400 to 1900 CE. Not only are the R^2 measures comparable to those shown in Table 2.A, but also *CHRISTIANMUSLIM* and *MUSLIMUSLIM* are statistically significant at the 5 percent level or higher in nine out of 12 times and directionally always consistent with the Table 2.A results. These findings imply that, even with a four century lag between the measurement of our explanatory and dependent variables, Muslim versus

 $^{^{33}}$ We also examined our main findings using data for the period between 1400 and 1700 CE. Since those data yielded results that are analogous to the oned we discuss here, we have chosen not to report them.

Christian confrontations as well as intra-Islam conflicts—driven mostly, if not solely, by the Shi'a against Sunni confrontations—depressed religious fractionalization.

[Tables 6.A, 6.B and 6.C about here.]

A four-century lag between measures of conflict and fractionalization provides us some comfort that we are distilling off any impact fractionalization could have had on conflicts. Nonetheless, even a four century lag would not compensate for omitted variable biases inherent in the results above. This is why we controlled for the dates of independence in some alternative estimates and substituted more or less aggregated geographic controls for countries in Europe in various other regressions. Neither of these alterations influenced the essence of our findings. Furthermore, for an empirical work whose key explanatory data cover the medieval era, our R^2 measures are unusually high, approaching .60 in some specifications where religious fractionalization is the dependent variable. This is another reason why omitted variable biases are probably not exerting a meaningful bias in the results.

We experimented with additional controls in our estimates, such as whether the countries were part of the East bloc, their dates of independence or the frequency and duration of conflicts involving the Sunni and Shi'a denominations of Islam, in particular. Although we have chosen not to report these additional estimates here, doing so neither altered our central qualitative findings nor yielded significant coefficients on dates of independence or the standard measures of conflict involving Muslim versus Muslim actors. It did, however, generate typically positive coefficients on the dummy for the East bloc in regressions involving all three fractionalization measures.

As another line of inquiry, what can we say about the role of violent conflicts in development through their impact on institutions? As we alluded to in our introduction, there is a strand in the empirical development literature that shows that ethnic and linguistic fractionalization has detrimental effects on economic growth and development, but only indirectly. Since we have found that the history of religious conflicts had effects on modern-era cross-country differences of fractionalization, we ought to examine if conflicts alone can help to explain differences in institutional quality.

Tables 7.A and 7.B report our findings with countries' polity scores as the dependent variable, regressed on our standard set of explanatory variables. As shown, we pick up a strong impact of the history of conflicts over the period between 1400 to 1900 CE on the quality of polities in 1994. Whereas the incidence of Muslim versus Christian conflicts and intra-Islam confrontations had a dampening effect on religious fractionalization, they are shown to have had positive and, in five of the six specifications, statistically significant effects on polities. As was the case with religious fractionalization, the incidence of intra-Christianity conflicts had no meaningful bearing on polity scores.

The existing literature on the subject has long established a generally robust adverse impact of fractionalization on measures of institutional quality. And though for the sake of brevity we have chosen not to present them here, estimating the analogs of the regressions in Table 7.A, but replacing our conflict measures with the three fractionalization measures, we too were able to verify the statistically significant, detrimental effects of ethnic and linguistic fractionalization on polity scores.

Along with what we documented in Table 7.A, these findings raise an intriguing question: If fractionalization is influenced in part by violent conflicts and religious confrontations, which, together with fractionalization, then have a bearing on the crosscountry differences of polity strength, do violence and religious confrontations have a *direct* long-term impact on *POLITY* or do they impact it only *indirectly* through fractionalization?

Given the data at hand, this is a question to which we can provide some answers. In Table 7.B we attempt to do so.³⁴ Interestingly, when we include the three measures of fractionalization along with the standard list of conflict variables we relied upon in the previous tables, we find that neither religious nor linguistic fractionalization impacts cross-country differences in institutional quality, as proxied by polity scores. By contrast, ethnic fractionalization is a strong negative predictor of institutional quality across countries. Interestingly, *CHRISTIANMUSLIM* and *MUSLIMUSLIM* continue to show significant and positive effects on institutional quality. For instance, the frequency of Muslim versus Christian violent conflicts has positive coefficients in all six specifications and it is statistically significant at the 5 percent or higher level in five of those.³⁵ These

³⁴These results as well as those shown in Table 7.A were produced using conflict data covering the period between 1400 and 1900 CE, but an exercise in which we used data for the 1400 to 1600 CE interval instead generated qualitatively similar findings. Hence, we chose not to report them here.

³⁵To see if violent conflicts impacted a narrower measure of polity, we ran regressions similar to the one we discuss here, using the democracy index score as the dependent variable instead. Doing so we

estimates suggest to us that the history of violent confrontations among Muslims and between Christians and Muslims not only indirectly impacted the institutional environment positively by lowering religious fractionalization, but also directly and positively. How the latter effect came to materialize is open to speculation. Perhaps, a long history of violent conflict among Muslims and between Christians and Muslims served to instill in societies the costs of violent strife and bolster a culture of consensus-building.

There are some not necessarily mutually exclusive observations we can make on this basis. One, the very long-run histories of conflict, in general, and those that are of an ecclesiastical nature, in particular, had some long-lasting and direct effects on crosscountry differences in institutional quality. Two, the long-standing standard arguments as well as findings that fractionalization impacts institutions seem to be sensitive to whether or not the direct effects of the history of violence on institutions are controlled for, although the role of ethnic fractionalization in institutional quality seems to be the most robust. Third, the fact that religious and linguistic fractionalization don't have robust effects on institutions is not tantamount to concluding that they have no impact on the evolution of institutions, although they do indeed suggest that fractionalization is endogenous.

[Tables 7.A and 7.B about here.]

5. Conflicts & Endogenous Country Borders

Next, take the fact that our unit of analyses is based on countrywide data, although country size and border formations are obviously endogenous. This is relevant for our study to the extent that causality runs from violent confrontations to country size and formation, to measures of fractionalization. To account for such effects and channels of causality, we typically controlled for land area and dates of independence. Neither of these controls had significant effects on fractionalization, although the role of violent conflicts remained robust to the inclusion of the controls. We find this indicative of the fact that the history of conflicts had independent effects on fractionalization which went beyond any role it brought to bear on country size and formation.

Iyigun, Nunn and Qian (in progress) explore the determinants of conflict and state generally found conflicts to have insignificant effects on democracy. formation based on the same underlying data we employ here. However, their crosssection units of observation are 50-by-50 cells covering Europe, Middle East and North Africa. Moreover, their conflict and state borders data are organized as a panel covering seven time periods at the top of each century from 1400 CE to 2000 CE. Iyigun, Nunn and Qian use these data primarily to test the determinants of conflict as well as state formation and consolidation geographically over time. Their data include three alternative polity size measurements. One of them, which we shall label as $INBORDER_{it}$, is a dummy for whether or not cell *i* fell strictly within the domain of a politically independent unit at time *t*. Next, they have a measure of the land area of the political unit cell *i* was associated with at time *t*, $POLITYAREA_{it}$. Third, they construct the number of political units that appear in cell *i* at time *t*, which we shall label as $POLITYCOUNT_{it}$.

Note that $INBORDER_{it}$ as well as $POLITYAREA_{it}$ would be alternative but positive measures of political consolidation, whereas $POLITYCOUNT_{it}$ ought to be associated positively with political fragmentation. Also, INBORDER and POLITY– COUNT are more localized measures of political unity, whereas POLITYAREAcaptures the extent to which any given cell is politically associated with neighboring cells and beyond.

Using these data, we can examine the extent to which our ecclesiastical conflict measures affect the three alternative political fragmentation measures. In particular, we can estimate

$$STATEFORM_{it} = \lambda_0 + \lambda_1 STATEFORM_{it} + \lambda_2 CHRISTIANMUSLIM_{it-1}$$

$$+\lambda_2 CHRISTIANCHRISTIAN_{it-1} + \lambda_3 MUSLIMUSLIM_{it-1} \tag{4}$$

$$+\sum_{c}\gamma_{c}I_{i}^{c} + \sum_{j=1400}^{2000}\rho_{j}I_{t}^{j} + \varepsilon_{i},$$

where $STATEFORM_{it}$ is one of three alternative political fragmentation variables we just defined; $CHRISTIANMUSLIM_{it-1}$, $CHRISTIANCHRISTIAN_{it-1}$, $MUS - LIMMUSLIM_{it-1}$ are the analogs of our standard conflict measures constructed at the

cell and time period disaggregation level and lagged one century; and I_i^c and I_t^j are cell and century fixed effects.

For our baseline results, we observe our political fragmentation variable, STATE – $FORM_{it}$, at the top of each century between 1500 and 1900 CE and we aggregate our explanatory variables over the periods of 1400-1499, 1500-1599, 1600-1699, 1700-1799 and 1800-1899.

Our findings are reported in Table 8.A. As shown in column (1), neither Christian versus Muslim conflicts nor intra-religious feuds averaged over a given century impacted whether or not a given cell fell strictly within the borders of a polity in the subsequent century. In contrast, more intra-Christian conflicts within a cell did make it more likely that it was politically fragmented later on, given the results in column (2). And *CHRISTIANMUSLIM* had a similar fragmentary effect according the estimates shown in our final column of Table 8.A. We interpret this to be evidence consistent with our earlier findings: Christian versus Muslim conflicts and Muslim versus Muslim confrontations not only produced more religious homogeneity within country borders, but also more and smaller independent political units. By producing more political fragmentation, ecclesiastical conflicts might have had an influence on cross-country measures of fractionalization too.

Recall that the history of conflicts by the religious identity of the parties involved have less statistical power in explaining the extent to which countries were religiously fragmented in 1900. Our political borders data, in fact, enable us to explore if the reconfiguration of borders and polities during the 20th century was particularly important. To be specific, given that these panel data run through the year 2000, we were able to rerun equation (4) where our dependent variable $STATEFORM_{it}$ was measured at the top of each century between 1500 and 2000 CE and our explanatory variables were averaged over the period of 1900-1999 in addition to 1400-1499, 1500-1599, 1600-1699, 1700-1799 and 1800-1899.

We report the outcome of these regressions in our final table. The results listed in column (1) of Table 8.B are fairly in line with those shown in the same column of the previous table: we still do not see much evidence that *MUSLIMUSLIM* or *CHRISTIANMUSLIM* had impact on political borders. But, turning to the next two specifications where we employ *POLITYAREA* and *POLITYCOUNT* as our dependent variables, we get different outcomes than those in Table 8.A as well as column (1) of Table 8.B. Specifically, we see that Christian versus Muslim feuds as well as intra-Islam conflicts generate more political fragmentation in both regressions and that their overall effects are stronger than those in Table 8.A. Thus, we see that 20th-century developments had a statistically important impact on political fragmentation as well.

[Tables 8.A and 8.B about here.]

6. Conclusion

A sizable literature has shown that fractionalization influences economic development and growth indirectly, without yielding any evidence that the standard measures of ethnic or religious fractionalization has a quantitatively and statistically significant effect on violent conflict within countries.

We examined the long-run determinants of contemporary fractionalization across countries along the ethnic, linguistic and religious dimensions. Relying on some novel data that cover 953 violent confrontations which took place in 59 countries over the period between 1400 and 1900 CE, we identified that the frequencies and types of conflict influenced contemporary levels of religious and to some extent ethnic fractionalization too.

We found that the frequency of wars between Muslims and Christians or among Muslims is positively and significantly associated with current levels of religious homogeneity. An additional violent incident between Muslim and Christian players within the current day borders of a country lowered fractionalization by about 3 to 4 percent, whereas a conflict among the Muslims—in particular, involving the Sunni versus the Shi'a—lowered it by about 4 to 7 percentage points. These results are robust to the inclusion of the various control variables including population, distance to the equator and geographic region. Our conclusions are also robust to incorporating a much longer time lag than one century between measurements of fractionalization and conflict incidence.

Furthermore, our investigation revealed that Muslim versus Christian confrontations and intra-Islam conflicts did exert statistically significant effects on political fragmentation as well. In this, we provide some new evidence that the history of violent conflicts between religious groups led to less religious fractionalization by altering not only demographics but also political borders.

In sum, the contemporary cross-country variations in religious heterogeneity reflect the *history* and *type* of ecclesiastical conflicts within countries. Still, in interpreting our findings, it is important to bear in mind that our data cover the history of a limited geographic area extending from Europe, the Middle East, the near East to the Arabian peninsula and North Africa; they cover neither sub-Saharan Africa, Far East Asia nor the Americas. Thus, while our geographic coverage pertains to the regions of the world in which major ecclesiastical dynamics and interactions unfolded more frequently historically, one would have to be cautious in the external validity of these conclusions both in time and space.

If conflicts and religiously motivated or sustained confrontations do help to explain the cross-country variations in the quality of polities and the extent of fractionalization, then what factors influence the historical patterns of conflict? Besides some of the literature referenced above that puts a premium on cultural differences as a determinant of violent conflicts historically, some other influential contributions, such as Tilly (1992), have at least implicitly emphasized the role of technological change and geography. This is an area of ongoing investigation that is pursued in Iyigun, Nunn and Qian (in progress).

7. References

Abramitzky, R. (2008). "The Limits of Equality: Insights from the Israeli Kibbutz," *Quarterly Journal of Economics*, 123:3, August, 1111–59.

Alesina, A., R. Baqir and W. Easterly. (1999). "Public Goods and Ethnic Divisions," *Quarterly Journal of Economics*, 114 (4), November, 1243-84.

Alesina, A., A. Devleeschauwer, W. Easterly, S. Kurlat and R. Wacziarg. (2003). "Fractionalization," *Journal of Economic Growth*, 8, 155-94.

Alesina, A. and E. Spolaore. (2007). "International Conflict, Defense Spending and the Size of Countries," *European Economic Review*.

Barbieri, K.(1996). "Economic Interdependence: A Path to Peace or a Source of Interstate Conflict?" *Journal of Peace Research*, 33(1), 29-49.

Barbieri, K. and G. Schneider. (1999), "Globalization and Peace: Assessing New Directions in the Study of Trade and Conflict", *Journal of Peace Research*, 36(4), 387-404.

Barro, R. J. and R. McCleary. (2003). "Religion and Economic Growth," American Sociological Review, October.

Barro, R. J. and R. McCleary. (2005). "Which Countries Have State Religions?," *Quarterly Journal of Economics*, November.

Becker, O. S. and L. Woessmann. (2009). "Was Weber Wrong?: A Human Capital Theory of Protestant Economic History," *Quarterly Journal of Economics*, forthcoming.

Berman, E. (2000). "Sect, Subsidy and Sacrifice: An Economist's View of Orthodox Jews," *Quarterly Journal of Economics*, August.

Botticini, M. and Z. Eckstein. (2005). "Jewish Occupational Selection: Education, Restrictions, or Minorities?," *Journal of Economic History*, 65:4, December.

Botticini, M. and Z. Eckstein. (2007). "From Farmers to Merchants, Voluntary Conversions and Diaspora: A Human Capital Interpretation of Jewish History," *Journal of the European Economic Association*, no. 5, September, 885-926.

Brecke, **P.** (1999). "Violent Conflicts 1400 A.D. to the Present in Different Regions of the World," 1999 Meeting of the Peace Science Society, unpublished manuscript.

Brecke, P. (in progress). "The Conflict Dataset: 1400 A.D. - Present," Georgia Institute of Technology.

Campos, N, and V. S. Kuzeyev. (2007). "On the Dynamics of Ethnic Fractional-

ization," American Journal of Political Science, 51 (3), July, 620-39.

Canning, D. and M. Fay. (1993). "The Effects of Transportation Networks on Economic Growth," Columbia University, unpublished manuscript.

Caselli, F. and J. Coleman. (2006). "On the Theory of Ethnic Conflict," London School of Economics, unpublished manuscript.

Cioffi-Revilla, C. (1996). "Origins and Evolution of War and Politics," *International Studies Quarterly*, 40 (1), March, 1-22.

Clingingsmith, D., A. I. Khwaja, and M. Kremer. (2009). Estimating the Impact of the Hajj: Religion and Tolerance in Islam's Global Gathering," *Quarerly Journal of Economics*, 124:3, August, 1133–70.

Collier, P. and A. Hoeffler. (2005). "Coup Traps: Why does Africa have so many Coups d'Etat?," Department of Economics, University of Oxford, unpublished manuscript.

Collier, P. and A. Hoeffler. (2007). "Civil War," in the Handbook of Defense Economics 2, eds. Todd Sandler and Keith Hartley, April.

Constable, O. R. (2006). "Judaism, Christanity and Islam in Spain from the Eighth to the Fifteenth Centuries," in *Religious Fondations of Western Civilization: Judaism, Christianity and Islam*, in J. Neusner, ed., (Nashville, TN: Abingdon Press).

Easterly, W. and R. Levine. (1997). "Africa's Growth Tragedy: Policies and Ethnic Divisions," *Quarterly Journal of Economics*, 111 (4), November, 1203-50.

Ekelund, R., R. D. Tollison, G. M. Anderson, R. F. Hebert and A. B. Davidson. (1996). Sacred Trust: The Medieval Church as an Economic Firm, (New York, NY: Oxford University Press).

Ekelund, R., R. F. Hebert, and R. Tollison. (2002). "An Economic Analysis of the Protestant Reformation," *Journal of Political Economy*, June.

Emmanuel, A. (1972). Unequal Exchange: A Study of the Imperialism of Trade, (New York & London: Monthly Review Press).

Esteban, J. and D. Ray. (2010). "Linking Conflict to Inequality and Polarization," *American Economic Review*, forthcoming.

Fearon, J. and D. Laitin. (2003) "Ethnicity, Insurgency, and Civil War," American Political Science Review, 97:75-90.

Fernandez, R., A. Fogli and C. Olivetti. (2004). "Mothers and Sons: Preference Formation and Female Labor Force Dynamics," *Quarterly Journal of Economics*, 119 (4), 1249-1299, 2004.

Fernandez, R. (2007). "Culture and Economics," in the New Palgrave Dictionary of *Economics*, 2nd edition, edited by Steven N. Durlauf and Lawrence E. Blume, Palgrave Macmillan (Basingstoke and New York).

Glaeser, E. L., and B. I. Sacerdote. (2002). "Education and Religion." Harvard University, unpublished manuscript.

Glaeser, E. L., R. La Porta, F. Lopez-de-Silanes, and A.Shleifer. (2004). "Do Institutions Cause Growth?" *Journal of Economic Growth* 9 (3): 271-303.

Glaeser, E. L. (2005) "The Political Economy of Hatred," *Quarterly Journal of Economics*, 120 (1), January, 45-86.

Greif, A. (1993). "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition," *American Economic Review*, 83 (3), June, pp. 525-48.

Greif, A. (1994). "Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies," *Journal of Political Economy*, 102 (5), October, pp. 912-50.

Greif, A. (2006). *Institutions: Theory and History*, (Cambridge: Cambridge University Press).

Grossman, H. I. (1994). "Production, Appropriation, and Land Reform," *American Economic Review*, 84(3), June, 705-12.

Grossman, H. I. and M. Kim. (1995). "Swords or Plowshares? A Theory of the Security of Claims to Property," *Journal of Political Economy*, 103(6), December, 1275-1288.

Grossman, H. I. and M. Iyigun. (1995). "The Profitability of Colonial Investment," *Economics & Politics*, 7:3, November, 229-24.

Grossman, H. I. and M. Iyigun. (1997). "Population Increase and the End of Colonialism," *Economica*, 64(3), August, 483-493.

Guiso, L., P. Sapienza, and L. Zingales. (2003). "People's Opium? Religion and Economic Attitudes." *Journal of Monetary Economics*, 50 (1), 225–82.

Guiso, L., P. Sapienza, and L. Zingales. (2006). "Does Culture Affect Economic Outcomes?" *Journal of Economic Perspectives*, Spring, 20 (2), 23-48.

Haavelmo, T. (1968). A Study in the Theory of Economic Evolution, (Amsterdam: North-Holland).

Hafer, C. (2006). "On the Origins of Property Rights: Conflict and Production in the State of Nature," *Review of Economic Studies*, January, 73 (1) 119-43.

Hirshleifer, J. (1991). "The Paradox of Power," *Economics & Politics*, 3:3, November, 177-200.

Huntington, S. P., (1993). "The Clash of Civilizations?," *Foreign Affairs*, Council on Foreign Relations, Summer issue.

Huntington, S. P., (1996). The Clash of Civilizations and the Remaking of World Order, (New York, NY: Simon & Schuster).

Iannaccone, L. R. (1992). "Sacrifices and Stigma: Reducing the Free-Riding in Cults, Communes and Other Collectives." *Journal of Political Economy* 100 (2), April, 271—91.

Inglehart, R and W.E. Baker. (2000). "Modernization, Cultural Change, and the Persistence of Traditional Values," *American Sociological Review*, 65:19-51.

Iyigun, M. (2007). "Monotheism (From a Sociopolitical and Economic Perspective)," IZA Working Paper No. 3116, October.

Iyigun, M. (2008a). "Luther and Suleyman," *Quarterly Journal of Economics*, 123 (4), November, 1465-94.

Iyigun, M. (2008b). "Lessons from the Ottoman Harem (On Ethnicity, Religion and Conflict)," IZA Working Paper No: 3556, July.

Iyigun, M. (in progress). *Tales of Faith in Socioeconomic Progress*, (Chicago, IL: The University of Chicago Press), book manuscript.

Iyigun, M., N. Nunn and N. Qian (in progress). "Testing Tilly: Evidence from 1400-1945 CE Europe," University of Colorado, mimeo.

Jha, S. (2008). "Trade, Institutions and Religious Tolerance: Evidence from India," Stanford Business School, unpublished manuscript.

Knack, S. and P. Keefer. (1995). "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures," *Economics and Politics* 7(3):207-227 (1995).

Kontogiorgi, E. (2006). Population Exchange in Greek Macedonia: The Forced Settlement of Refugees 1922-1930, (Oxford: Oxford Historical Monographs).

Kumrular, Ö. (2008). *Türk Korkusu: Avrupa'da Türk Düşmanliğinin Kökeni*, (İstanbul, Türkiye: Doğan Kitap).

Kuran, T. (2004a). "Why the Middle East Is Economically Underdeveloped: Historical

Mechanisms of Institutional Stagnation," *Journal of Economic Perspectives*, 18, Summer, 71-90.

Kuran, T. (2004b). "The Economic Ascent of the Middle East's Religious Minorities: The Role of Islamic Legal Pluralism," *Journal of Legal Studies*, 33, June, 2003, 475-515.

Kuran, T. (2005). "The Logic of Financial Westernization in the Middle East," *Journal of Economic Behavior and Organization*, 56 (April 2005): 593-615.

La Porta, R., F. Lopez de Silanes, A. Shleifer, and R. W. Vishny. (1999). "The Quality of Government," *Journal of Law, Economics and Organization*, 15 (1), 222-79.

Landes, D. (1998). The Wealth and Poverty of Nations, (New York, NY: W. W. Norton & Co.).

Lee, J. and J. H. Pyun. (2008). "Does Trade Integration Contribute to Peace?," University of California, Davis, unpublished manuscript.

Levy, J. S. (1983). War in the Modern Great Power System, 1495 - 1975, (Lexington, KY: The University Press of Kentucky).

Lewis, L. D. (2008). God's Crucible: Islam and the Making of Europe, 570-1215, (New York, NY: W. W. Norton).

MacCulloch, D. (2003). The Reformation: A History, (New York, NY: Viking).

MacMillan, M. (2001). Paris 1919: Six Months that Changed the World, (New York, NY: Random House).

Mauro, P. (1995). "Corruption and Growth," *Quarterly Journal of Economics*, 110 (3), August, 681-712.

McCleary, R.M. and R.J. Barro. (2006). "Religion and Political Economy in an International Panel," *Journal for the Scientific Study of Religion*," 45, June, 149-175.

McEvedy C. and R. Jones. (1978) Atlas of World Population History. Facts on File, New York.

McNeill, W. (1984). The Pursuit of Power : Technology, Armed Force, and Society since A.D. 1000, (Chicago, IL: University of Chicago Press).

Miguel, E, S. Satyanath and E. Sergenti. (2004), "Economic Shocks and Civil Conflict: An Instrumental Variables Approach," *Journal of Political Economy*, 112: 725-753.

Montalvo, J. G. and M. Reynal-Querol. (2005a), "Ethnic Polarization, Potential Conflict and Civil War," *American Economic Review*, 95, 796–816.

Montalvo, J. G. and M. Reynal-Querol. (2005b), "Ethnic Diversity and Economic Development" *Journal of Development Economics*, 76, 293-323.

Moore, R. I. (1994). *The Origins of European Dissent*, originally published by Allen Lane, 1985, (Toronto, ON: University of Toronto Press).

Polachek, S. (1980), "Conflict and Trade", Journal of Conflict Resolution, 24 (1), 57-78.

Polachek, S., J. Robst and Y-C. Chang. (1999), "Liberalism and Interdependence: Extending the Trade-Conflict Model", *Journal of Peace Research*, 36 (4), 405-422.

Ray, D. (2005). "Polarization and Conflict," BP Lecture, London School of Economics, New York University, mimeo, May.

Richardson, L. F. (1960). *Statistics of Deadly Quarrels*, (Pittsburgh, PA: The Boxwood Press).

Shaw, S. (1976). *History of the Ottoman Empire and Modern Turkey*, Vol. 1, (Cambridge: Cambridge University Press).

Shaw, S. J. and E. K. Shaw. (1976). *History of the Ottoman Empire and Modern Turkey*, Vol. 2, (Cambridge: Cambridge University Press), pp. 239-41.

Skaperdas, S. (1992). "Cooperation, Conflict, and Power in the Absence of Property Rights," *American Economic Review*, September, 82, 720-39.

Skaperdas, S. (2005). "The Market for Protection and the Origin of the State," University of California at Irvine, unpublished manuscript, May.

Spolaore, E. and R. Wacziarg. (2009). "War and Relatedness," NBER Working Paper No: 15095, June.

Temin, P. (1997). "Is it Kosher to Talk about Culture?" *Journal of Economic History*, 57 (2), June, 267—87.

Tilly, C. (1992). Coercion, Capital and European States: AD 990 - 1992 (Studies in Social Discontinuity), (New York, NY: Blackwell Publishers).

Wilkinson, D. (1980). Deadly Quarrels: Lewis F. Richardson and the Statistical Study of War, (Berkeley, CA: University of California Press).

Woods, F. A. and A. Baltzly. (1915). Is War Diminishing? A Study of the Prevalence of War in Europe from 1450 to the Present Day, (Boston, MA: Houghton Mifflin Co.).

Figure 1: Conflitcs by Location and Time



Source: Iyigun, Nunn and Qian (in progress).

Figure 2: Christian on Christian Conflicts by Location



Source: Iyigun, Nunn and Qian (in progress).

Figure 3: Muslim on Muslim Conflites by Location



Source: Iyigun, Nunn and Qian (in progress).

Figure 4: Christian on Muslim Conflicts by Location



Source: Iyigun, Nunn and Qian (in progress).

Figure 5: Religious Fractionalization by Country in 2000



Data Source: Alesina, Devleesschauwer, Easterly, Kurlat and Wacziarg (2003).

1400 CE -	$1400 \ CE - 1900 \ CE$					The Correlation Matrix					
n = 59	Mean	St. Dev.	RELIG	RFBARRO	<i>RF</i> 1900	AVGC	MSCHR	MM	CC	DRMC	DRMM
RELIGFRA	.359	.220	1								
RELFBARRO	.359	.235	.806	1							
RELFR1900	.229	.191	.589	.709	1						
AVGCONF	16.2	23.1	.087	.184	.126	1					
CHRMUS	2.95	5.44	063	.025	.186	.395	1	•••			
MUSMUS	1.20	5.13	237	224	.054	.132	.171	1			
CHRSCHR	10.9	20.6	.186	.267	.093	.937	.152	113	1		
DURCM	1.52	2.12	028	.016	.027	067	.344	013	148	1	
DURMM	.263	.961	.011	006	.070	.004	.018	.503	119	.048	1
DURCC	1.34	1.67	.425	.491	.375	.370	.018	165	.458	202	.176

Table 1: Descriptive Statistics and the Correlation Matri

1400 CE	- 1900 (CE	The Correlation Matrix								
n = 59	Mean	St. Dev.	RELG	ETHN	LING	YRCM	YRMM	YRCC	MIDEA	BALK	EASTEU
RELFRAC	.359	.220	1								
ETHNFRAC	.318	.208	.083	1							
LINGFRAC	.271	.218	.168	.671	1						
YRCHRMUS	1627	119.4	074	068	097	1					
YRMUSMUS	1693	93.4	100	.200	.094	.219	1				
YRCHRCHR	1637	108.2	.346	151	.065	032	367	1			
MIDEAST	.203	.406	034	.131	020	.079	.593	517	1		
BALKAN	.102	.305	.093	.049	105	.328	171	.249	162	1	
EASTEU	.169	.378	.243	093	008	.216	120	.206	217	162	1
CENTRLEU	.102	.305	.036	.098	.085	221	155	.149	146	109	107

Table 1: Continued

1400 CE -	- 1900 C	Έ				The C	orrelatio	n Matrix			
n = 59	Mean	St. Dev.	RELIG	ETHN	LING	POL	GDP	BUFFR	EAST	ROM	JERUS
RELIGFRAC	.369	.222	1								
ETHNOFRAC	.304	.204	.087	1							
LINGOFRAC	.269	.215	.296	.688	1						
POLITY94	5.02	6.02	.151	400	201	1					
GDPCAP	14644	10875	085	293	163	.570	1				
BUFFRZNE	.25	.437	.203	.235	.049	.098	151	1			
EASTBLOC	.346	.480	.465	.268	.153	.034	426	.585	1		
ROME	1093	663.7	074	.327	.294	481	354	344	142	1	
JERUS.	1368	650.0	068	103	022	.355	.233	072	085	148	1
MECCA	1951	763.3	.007	150	052	.472	.298	.045	.020	291	.916

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS	-0.0125**	-0.0093	-0.0084*	-0.0086	-0.0154^{***}	-0.0161***
	(0.00274)	(0.00472)	(0.00389)	(0.00451)	(0.0025)	(0.00169)
MUS.MUS	-0.0066***	-0.0105**	-0.00967**	-0.0113**	-0.00697**	-0.00830***
	(0.00064)	(0.00283)	(0.00231)	(0.0029)	(0.0024)	(0.00097)
CHR.CHR	0.00227	0.00172	0.0017	0.00114	0.00371	0.00316
	(0.00140)	(0.000976)	(0.0011)	(0.00093)	(0.0031)	(0.00181)
MIDEAST	0.313^{***}	0.331^{***}	0.308^{***}	0.329^{***}	0.0599	0.210^{*}
	(0.00424)	(0.0121)	(0.0266)	(0.0241)	(0.224)	(0.0958)
BALKANS	0.508^{***}	0.325^{*}	0.289	0.278	0.365^{**}	0.443^{***}
	(0.0181)	(0.130)	(0.149)	(0.166)	(0.106)	(0.0169)
ISLAND	0.260^{***}	0.103	0.0861	0.101	0.0776	0.211^{**}
	(0.0317)	(0.0955)	(0.149)	(0.171)	(0.295)	(0.0661)
POPDEN		$-5.52e-05^{**}$	$-5.48e-05^{**}$	0.118	0.223	
		(1.46e-05)	(1.62e-05)	(0.0826)	(0.159)	
MUS.MJR			-0.115	-0.0600	0.00714	
			(0.0882)	(0.0766)	(0.0626)	
CHR.MJR			-0.0875	-0.0443	-0.0294	
			(0.106)	(0.0968)	(0.107)	
PD1500				-3,780***	$-2,625^{*}$	-2,970**
				(634.5)	(1, 142)	(959.1)
ROME					0.132	8.75e-02
					(0.160)	(6.26e-02)
JERSLM					-0.368**	-0.388***
					(8.38e-02)	(1.01e-02)
MECCA					0.221^{*}	0.290^{***}
					(7.98e-02)	(4.29e-02)
	50	50	50			~ ~
Ubs.	59	59	59	55	55	55
R-squared	0.372	0.440	0.454	0.510	0.594	0.566

Table 2.A: Impact of Conflicts on Religious Fractionalization (1400 – 1900 CE)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS	-0.00209	-0.00735	-0.00585	-0.00687	-0.0103	-0.0108
	(0.00382)	(0.00720)	(0.00676)	(0.00929)	(0.0127)	(0.00638)
MUS.MUS	0.00209	0.00464	0.00494	0.00525	0.00829	0.00789
	(0.00173)	(0.00436)	(0.00539)	(0.00776)	(0.00863)	(0.00411)
CHR.CHR	-0.00269*	-0.00278	-0.00279	-0.00288	-0.000968	-0.000416
	(0.00114)	(0.00161)	(0.00169)	(0.00246)	(0.00418)	(0.00162)
MIDEAST	-0.0502**	-0.0620**	-0.0776	-0.0346	-0.261	-0.438
	(0.0110)	(0.0164)	(0.0539)	(0.0444)	(0.219)	(0.254)
BALKANS	-0.0386	0.0757	0.0680	0.122	0.118	0.000329
	(0.0283)	(0.164)	(0.160)	(0.229)	(0.274)	(0.0445)
ISLAND	-0.268***	-0.198	-0.171	-0.0334	-0.214	-0.450**
	(0.0276)	(0.131)	(0.122)	(0.164)	(0.183)	(0.114)
POPDEN		-9.81e-05***	$-9.72e-05^{**}$	-0.318	-0.195	
		(1.97e-05)	(2.13e-05)	(0.342)	(0.393)	
MUS.MJR			-0.0709	-0.117	-0.0843	
			(0.207)	(0.185)	(0.216)	
CHR.MJR			-0.0951	-0.0969	-0.0581	
			(0.0873)	(0.0924)	(0.124)	
POPD1500				1,197	1,194	1,403
				(4,854)	(4,545)	(2,431)
ROME					0.167	0.268
					(0.165)	(0.132)
JERSLM					-0.150	-0.186
					(0.257)	(0.165)
MECCA					0.129	0.121
					(0.255)	(0.145)
Obs.	57	57	57	53	53	53
R-squared	0.216	0.277	0.288	0.326	0.354	0.306
	Standard	d errors cluster	ed regionally	(in parenth	eses)	

Table 2.B: Impact of Conflicts on Ethnic Fractionalization (1400 – 1900 CE)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS	-7.65e-05	-0.00441	-0.00107	0.000573	-0.00456	-0.00910*
	(0.00142)	(0.00404)	(0.00386)	(0.00219)	(0.00513)	(0.00330)
MUS.MUS	0.00371^{*}	0.00403	0.00589^{*}	0.00313	0.00807^{*}	0.00916^{**}
	(0.00145)	(0.00333)	(0.00246)	(0.00324)	(0.00328)	(0.00253)
CHR.CHR	-0.00335***	-0.00354^{**}	-0.00356***	-0.00481***	-0.00332	-0.00128
	(0.000278)	(0.000788)	(0.000575)	(0.000802)	(0.00229)	(0.000887)
MIDEAST	-0.0416^{***}	-0.0402	-0.0978*	0.0231	-0.376	-0.433**
	(0.00818)	(0.0211)	(0.0354)	(0.0407)	(0.222)	(0.114)
BALKANS	-0.0208	-0.00278	-0.0780	-0.0208	-0.101	0.0451^{**}
	(0.0112)	(0.110)	(0.103)	(0.0768)	(0.107)	(0.0159)
ISLAND	-0.0392***	-0.0675	-0.0672	0.104	-0.152	-0.184*
	(0.00710)	(0.0784)	(0.0908)	(0.0713)	(0.211)	(0.0737)
POPDEN		0.0139	0.0144	-0.316**	-0.162	
		(0.00797)	(0.00728)	(0.0944)	(0.227)	
MUS.MJR			-0.296*	-0.324**	-0.299*	
			(0.117)	(0.105)	(0.121)	
CHR.MJR.			-0.271***	-0.290***	-0.243*	
			(0.0500)	(0.0388)	(0.110)	
PD1500				719.1	2,074	2,414***
				(909.1)	(2,011)	(457.4)
ROME					0.196	0.292**
					(0.179)	(8.24e-02)
JERSLM					-0.117	-0.277*
					(0.149)	(0.104)
MECCA					5.03e-03	0.158
					(0.198)	(0.146)
Obe	58	58	58	55	55	55
R-squared	0 171	0.209	0 324	0.365	0.300	0.202
ri byuarcu	0.111	1 1 1	0.024	(' 1	0.000	0.232

Table 2.C: Impact of Conflicts on Linguistic Fractionalization (1400 – 1900 CE)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS	-0.00732	-0.00861	-0.00710	-0.0104	-0.0141*	-0.0129**
	(0.00518)	(0.00806)	(0.00871)	(0.00834)	(0.00554)	(0.00453)
MUS.MUS	-0.00901***	-0.0129	-0.0149	-0.0122*	-0.0104**	-0.0120**
	(0.000971)	(0.00674)	(0.00850)	(0.00491)	(0.00249)	(0.00262)
CHR.CHR	0.00101	0.000929	0.000864	-0.000405	0.00268	0.00182
	(0.00198)	(0.00200)	(0.00221)	(0.00205)	(0.00385)	(0.00322)
CMDUM	-0.0778	-0.0287	0.158	0.494	0.865	0.875^{*}
	(0.544)	(0.623)	(0.761)	(0.676)	(0.474)	(0.397)
MMDUM	0.146	0.155^{**}	0.189^{***}	0.159^{**}	0.324^{**}	0.328^{**}
	(0.0923)	(0.0391)	(0.0314)	(0.0353)	(0.111)	(0.114)
CCDUM	0.302	0.416	0.400	0.172	-0.621*	-0.477
	(0.347)	(0.496)	(0.548)	(0.479)	(0.278)	(0.444)
YEARCM	6.44 e- 03	2.56e-02	-7.46e-02	-0.305	-0.000536	-0.000543
	(0.372)	(0.402)	(0.486)	(0.457)	(0.000302)	(0.000261)
YEARMM	-0.138***	-0.124**	-0.136	-0.243**	-0.223**	-0.192***
	(2.52e-02)	(3.89e-02)	(8.69e-02)	(5.50e-02)	(5.74e-02)	(1.67e-02)
YEARCC	-0.161	-0.241	-0.222	3.08e-02	0.455^{*}	0.303
	(0.159)	(0.252)	(0.303)	(0.198)	(0.212)	(0.271)
POPD1500				-4,339***	$-3,172^{**}$	$-3,197^{*}$
				(517.3)	(804.7)	(1, 467)
ROME					0.110	7.01e-02
					(0.106)	(6.95e-02)
JERUSLM					-0.452^{***}	-0.418^{***}
					(4.13e-02)	(4.85e-02)
MECCA					0.313***	0.286^{***}
					(4.21e-02)	(4.22e-02)
Obs.	59	59	59	55	55	55
R-squared	0.472	0.495	0.507	0.608	0.692	0.662

 Table 3: Impact of Duration and Timing of Conflicts on Religious Fractionalization

Note: Dependent variable: religious fractionalization in 2001; source: Alesina et al. (2003). Source of conflict data: Brecke (1999). Source of population data: McEvedy and Jones (1978). All geographic dummy variables and the duration of each type of conflict included in all regressions but now shown. EQUATOR, LANDAREA, LANDLOCK included in columns (2) through (6) but not shown. POP1000 included in columns (3) through (6) but not shown.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS	-0.0130*	-0.0110***	-0.0101**	-0.0108**	-0.0142***	-0.0133**
	(0.00550)	(0.00163)	(0.00283)	(0.00359)	(0.00226)	(0.00343)
CATH.PRO	0.0120	0.00763	0.00895	0.00337	0.00906	0.00580
	(0.00593)	(0.0146)	(0.0150)	(0.0198)	(0.00869)	(0.00605)
CATH.ORTH	-0.0128**	-0.00918	-0.0159	0.0168	-0.00590	-0.0111
	(0.00295)	(0.0218)	(0.0243)	(0.0243)	(0.0134)	(0.00699)
ORTH.PRO	0.0234	-0.00632	-0.00643	-0.0372	-0.0389	0.00687
	(0.0205)	(0.0421)	(0.0422)	(0.0502)	(0.0420)	(0.0153)
SUNNISHIA	-0.0247***	-0.0484**	-0.0428**	-0.0555**	-0.0437***	-0.0420**
	(0.00522)	(0.0129)	(0.0124)	(0.0130)	(0.00944)	(0.00985)
POPDEN		-7.07e-05***	-6.96e-05***	0.142	0.170	
		(1.15e-05)	(1.46e-05)	(0.154)	(0.135)	
MUSMJR			-0.140	-0.0749	-0.0367	
			(0.0803)	(0.0716)	(0.0333)	
CHRMJR			-0.0874	-0.0289	-0.0371	
			(0.116)	(0.0955)	(0.0947)	
POPD1500				-4,857***	-4,224***	-4,034***
				(821.8)	(612.8)	(405.1)
ROME					8.85e-02	4.52e-02
					(0.123)	(0.103)
JERUSLM					-0.253**	-0.307**
					(7.56e-02)	(8.81e-02)
MECCA					0.102	0.217^{**}
					(6.47e-02)	(7.08e-02)
Obs.	59	59	59	55	55	55
R-squared	0.350	0.408	0.428	0.493	0.558	0.509
	$\operatorname{Standaro}$	d errors cluster	ed regionally (in parenthes	ses)	
		*** p<0.01,	** p<0.05, * p	< 0.1		

Table 4: Impact of Denominational Conflicts on Religious Fractionalization

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS	-0.0076**	-0.0075**	-0.0058	-0.0065	-0.015***	-0.013**
	(0.0025)	(0.00198)	(0.0036)	(0.0037)	(0.0017)	(0.0032)
MUS.MUS	-0.0037***	-0.00794**	-0.0075**	-0.0085***	-0.0022	-0.0057*
	(0.00056)	(0.00193)	(0.0024)	(0.0011)	(0.0026)	(0.0026)
CHR.CHR	0.0022	0.000768	0.00076	0.00017	0.0029^{*}	0.0012
	(0.0011)	(0.000594)	(0.00068)	(0.00081)	(0.0013)	(0.0015)
MIDEAST	0.198^{***}	0.228^{***}	0.211^{***}	0.226^{***}	-0.263*	-0.080
	(0.0037)	(0.0146)	(0.036)	(0.028)	(0.123)	(0.166)
BALKANS	0.43^{***}	0.261^{**}	0.247	0.248	0.247	0.222^{**}
	(0.0173)	(0.0758)	(0.176)	(0.187)	(0.202)	(0.062)
ISLAND	0.278^{***}	0.118^{*}	0.140	0.149	-0.0193	0.111^{*}
	(0.0257)	(0.0541)	(0.256)	(0.252)	(0.230)	(0.05)
POPDEN		-7.16e-05**	$-7.07e-05^{**}$	0.202	0.370	
		(1.72e-05)	(1.56e-05)	(0.312)	(0.251)	
MUS.MJR			-0.0932	-0.0293	0.0395	
			(0.186)	(0.194)	(0.183)	
CHR.MJR			-0.110	-0.0585	-0.0274	
			(0.186)	(0.175)	(0.152)	
POPD1500				-4,365*	-2,594	-3,804**
				(1,580)	(1, 328)	(1,155)
ROME					0.000215^{**}	0.000123
					(6.60e-05)	(7.33e-05)
JERSLM					-0.000367*	-0.000286**
					(0.000139)	(8.18e-05)
MECCA					0.000144	0.000104
					(7.25e-05)	(5.05e-05)
	-	-	- -	-	- -	
Obs.	59	59	59	55	55	55
R-squared	0.340	0.419	0.431	0.495	0.581	0.545
	Standa	rd errors clus	tered regional	lv (m parent	heses)	

Table 5.A: Alternative Estimates (with Barro's Religious Adherence Data)

 *** p<0.01, ** p<0.05, * p<0.1

	(1)	(2)	(2)	(4)	(5)	(6)
VADIADIE	(1)	(2)	(3)	(4)	(0)	(0)
V ARIADLE						
	0.0001	0.0017	0.0010	0.00000	0.0076*	
CHR.MUS	-0.0031	-0.0017	0.0012	0.00096	-0.0076*	-0.0085
	(0.002)	(0.0012)	(0.0015)	(0.0019)	(0.0029)	(0.0046)
MUS.MUS	0.0050^{***}	0.00142	0.0015	0.00084	0.0063	0.0045
	(0.0005)	(0.00196)	(0.0021)	(0.0018)	(0.0035)	(0.0030)
CHR.CHR	0.0010	-0.00021	-0.00021	-0.00084	0.0024	0.0011
	(0.00067)	(0.0013)	(0.0013)	(0.002)	(0.0026)	(0.0017)
MIDEAST	0.0639***	0.089***	0.0718**	0.075***	-0.277	-0.161
	(0.00331)	(0.0092)	(0.0163)	(0.010)	(0.171)	(0.227)
BALKANS	0.263***	0.117	0.121	0.112	0.214	0.157**
	(0.0160)	(0.101)	(0.122)	(0.129)	(0.135)	(0.052)
LSLAND	0 109***	-0.0154	0.0552	0.043	0.0062	0.010
10 Lill VD	(0.0145)	(0.116)	(0.162)	(0.182)	(0.105)	(0.086)
$P \cap P \cap F N$	(0.0140)	7 340 05**	(0.102) 7 150 05**	(0.162)	(0.105)	(0.000)
TOTDEN		(2.04e-0.5)	(2.01, 05)	(0.130)	(0.176)	
MUCMID		(2.04e-05)	(2.01e-05)	(0.144)	(0.170)	
MUS.MJR			-0.104	-0.057	0.0278	
			(0.0648)	(0.07)	(0.0442)	
CHR.MJR			-0.171	-0.135	-0.116	
			(0.129)	(0.122)	(0.0933)	
POPD1500				-2,168*	-683.4	-1,731**
				(904.0)	(1,340)	(432.0)
ROME					0.000169	0.000116
					(0.000100)	(0.000119)
JERSLM					-0.000462	-0.000404*
					(0.000225)	(0.000187)
MECCA					0.000270	0.000244*
					(0.000165)	(0.000111)
					(0.000100)	(0.000111)
Obs	59	59	59	55	55	55
B squared	0 161	0.237	0.275	0.303	0.483	0.499
rt-squareu	Standar	d orrora alucta	v.210	$\frac{0.000}{1}$	0.400 hoses)	0.422
	Standaro	***0.01	** = <0.05 *	(in parent	neses)	
		p<0.01	, ™ p<0.05, *	p<0.1		

Table 5.B: Alternative Estimates (with 1900 Fractionalization Data)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS	-0.00528**	-0.0034	-0.0014	-0.0021	-0.0057*	-0.0075
	(0.00163)	(0.0046)	(0.0031)	(0.0034)	(0.0026)	(0.0043)
MUS.MUS	-0.00626***	-0.0103**	-0.0093**	-0.011**	-0.0093*	-0.011**
	(0.000546)	(0.00292)	(0.0033)	(0.0026)	(0.0043)	(0.0028)
CHR.CHR	0.00300^{***}	0.00198*	0.002	0.0017	0.0030	0.0024
	(0.000604)	(0.000913)	(0.0010)	(0.0020)	(0.0015)	(0.0014)
MIDEAST	0.238^{***}	0.262^{***}	0.229^{**}	0.25^{***}	0.149	0.217
	(0.00342)	(0.0229)	(0.054)	(0.048)	(0.173)	(0.193)
BALKANS	0.411^{***}	0.234^{*}	0.192	0.191	0.272	0.264
	(0.0129)	(0.109)	(0.226)	(0.244)	(0.175)	(0.138)
ISLAND	0.360^{***}	0.203^{*}	0.207	0.201	0.316^{*}	0.311^{*}
	(0.0133)	(0.0757)	(0.294)	(0.315)	(0.132)	(0.113)
POPDEN		-6.90e-05**	-6.79e-05**	0.164	0.169	
		(2.00e-05)	(1.96e-05)	(0.431)	(0.413)	
MUS.MJR			-0.172	-0.112	-0.0627	
			(0.249)	(0.257)	(0.210)	
CHR.MJR			-0.163	-0.119	-0.143	
			(0.263)	(0.257)	(0.187)	
POPD1500				-2,922	-2,496	-3,170**
				(2, 364)	(2,143)	(1,001)
ROME					8.32e-06	-9.20e-06
					(9.89e-05)	(9.86e-05)
JERSLM					-0.000280**	-0.000269**
					(9.72e-05)	(7.76e-05)
MECCA					0.000140*	0.000146
					(6.47e-05)	(0.000141)
					. ,	. ,
Obs.	59	59	59	55	55	55
R-squared	0.434	0.484	0.510	0.544	0.610	0.587
	Standar	d errors cluste	ered regionally	y (in paren	theses)	

Table 5.C: Alternative Estimates (with Religious Polarization Data)

*** p<0.01, ** p<0.05, * p<0.1

Note: Dependent variable: religious polarization in 2000; source: McCleary and Barro's Religious Adherence Dataset (2003). Source of conflict data: Brecke (1999). Source of population data: McEvedy and Jones (1978). Geographic dummy variables WESTERNEU, EASTERNEU, CENTRALEU, NORTHERNEU, ASIA, AFRICA included in all regressions but now shown. EQUATOR, LANDAREA, LANDLOCK included in columns (2) through (6) but not shown. POP1000 included in columns (3) through (6) but not shown.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE	~ /				~ /	
CHRMUS	-0.0183**	-0.00585	-0.00242	-0.00460	-0.0125**	-0.0196***
	(0.00655)	(0.00715)	(0.00585)	(0.00744)	(0.00374)	(0.00422)
MUSMUS	-0.0206***	-0.0345**	-0.0326***	-0.0374**	-0.0293***	-0.0291***
	(0.00308)	(0.00828)	(0.00664)	(0.00923)	(0.00623)	(0.00305)
CHRCHR	0.00362	0.00295	0.00297	0.00218	0.00474	0.00415
	(0.00245)	(0.00174)	(0.00190)	(0.00170)	(0.00470)	(0.00331)
MIDEAST	0.297^{***}	0.326^{***}	0.309^{***}	0.325^{***}	0.147	0.270^{**}
	(0.0119)	(0.0183)	(0.0230)	(0.0222)	(0.255)	(0.0841)
BALKANS	0.455^{***}	0.246*	0.219	0.211	0.288^{*}	0.373***
	(0.0175)	(0.114)	(0.140)	(0.162)	(0.123)	(0.00932)
ISLAND	0.245^{***}	0.0792	0.0835	0.0938	0.141	0.232*
	(0.0398)	(0.0910)	(0.161)	(0.183)	(0.302)	(0.0864)
POPDEN	. ,	$-5.67e-05^{**}$	$-5.51e-05^{**}$	0.122	0.172	. ,
		(1.60e-05)	(1.66e-05)	(0.0782)	(0.147)	
MUSMJR			-0.111	-0.0496	0.00460	
			(0.0841)	(0.0743)	(0.0461)	
CHRMJR			-0.107	-0.0589	-0.0625	
			(0.120)	(0.111)	(0.111)	
POPD1500			· · · ·	-3,800***	-3,233**	-3,394**
				(633.3)	(1,083)	(888.8)
ROME				× ,	7.21e-02	3.68e-02
					(0.167)	(6.80e-02)
JERUSLM					-0.298**	-0.332***
					(9.56e-02)	(2.50e-02)
MECCA					0.175*	0.256***
					(6.84e-02)	(3.83e-02)
Obs.	59	59	59	55	55	55
R-squared	0.360	0.427	0.443	0.500	0.569	0.538

Table 6.A: Impact of Conflicts on Religious Fractionalization (1400 – 1600 CE)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHRMUS	-0.00465	-0.0165	-0.0133	-0.00925	-0.0123	-0.0133*
	(0.00472)	(0.0122)	(0.0116)	(0.0130)	(0.0166)	(0.00505)
MUSMUS	0.00168	0.0118	0.0120	0.00950	0.0153	0.0142
	(0.00424)	(0.00989)	(0.0123)	(0.0174)	(0.0189)	(0.00673)
CHRCHR	-0.00466	-0.00478	-0.00477	-0.00474	-0.00265	-0.00181
	(0.00219)	(0.00275)	(0.00283)	(0.00390)	(0.00533)	(0.00229)
MIDEAST	-0.0458**	-0.0752**	-0.0828	-0.0374	-0.187	-0.358
	(0.0111)	(0.0202)	(0.0468)	(0.0409)	(0.162)	(0.193)
BALKANS	-0.0505**	0.0613	0.0699	0.0825	0.0849	-0.0425
	(0.0122)	(0.158)	(0.152)	(0.201)	(0.267)	(0.0325)
ISLAND	-0.262***	-0.191	-0.146	-0.0251	-0.152	-0.422**
	(0.0349)	(0.142)	(0.130)	(0.178)	(0.190)	(0.0992)
POPDEN		-0.000100***	$-9.82e-05^{**}$	-0.318	-0.233	
		(2.17e-05)	(2.27e-05)	(0.323)	(0.348)	
MUSMJR			-0.0522	-0.0993	-0.0772	
			(0.192)	(0.176)	(0.197)	
CHRMJR			-0.0970	-0.114	-0.0864	
			(0.0926)	(0.0932)	(0.0994)	
POPD1500				571.1	173.4	486.0
				(4, 334)	(3, 811)	(2,158)
ROME					0.128	0.230
					(0.119)	(0.111)
JERUSLM					-0.110	-0.146
					(0.200)	(0.137)
MECCA					0.114	0.112
					(0.227)	(0.143)
Oba	57	57	57	52	52	52
Dus. Requered	07 0 910	0.284	0.204	ე ვევ ეე	00 0244	00 0 997
n-squared	0.219	0.204	0.294	0.323	0.044	0.201

Table 6.B: Impact of Conflicts on Ethnic Fractionalization (1400 – 1600 CE)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE			~ /			
CHRMUS	-0.00388	-0.0109	-0.00185	0.00415	-0.00122	-0.0132
	(0.00210)	(0.00611)	(0.00713)	(0.00623)	(0.00896)	(0.00932)
MUSMUS	0.00903^{**}	0.0108	0.0158^{*}	0.00716	0.0189	0.0217^{*}
	(0.00300)	(0.00765)	(0.00608)	(0.00881)	(0.0103)	(0.00900)
CHRCHR	-0.00540***	-0.00556***	-0.00546***	-0.00687**	-0.00493	-0.00278
	(0.000798)	(0.00104)	(0.000970)	(0.00154)	(0.00345)	(0.00142)
MIDEAST	-0.0421***	-0.0507*	-0.0976**	0.0282	-0.338	-0.383*
	(0.00713)	(0.0209)	(0.0280)	(0.0447)	(0.228)	(0.148)
BALKANS	-0.0181**	-0.0130	-0.0830	-0.0396	-0.121	0.0146
	(0.00620)	(0.0972)	(0.107)	(0.0742)	(0.0846)	(0.0150)
ISLAND	-0.0366**	-0.0647	-0.0542	0.101	-0.117	-0.160*
	(0.0117)	(0.0740)	(0.0918)	(0.0752)	(0.179)	(0.0709)
POPDEN		0.0139	0.0148	-0.293**	-0.158	
		(0.00728)	(0.00697)	(0.0813)	(0.185)	
MUSMJR			-0.289*	-0.317**	-0.293*	
			(0.111)	(0.102)	(0.108)	
CHRMJR			-0.279***	-0.303***	-0.267**	
			(0.0450)	(0.0330)	(0.0871)	
POPD1500				1,044	$2,\!145$	$2,249^{**}$
				(873.8)	(1,794)	(517.1)
ROME					0.184	0.263^{**}
					(0.163)	(8.45e-02)
JERUSLM					-0.115	-0.250*
					(0.136)	(0.104)
MECCA					1.62e-02	0.151
					(0.184)	(0.149)
	F 0	F 0	F 0	~ ~		
Observations	58	58	58	55	55	55 0.070
K-squared	0.170	0.208	0.319	0.354	0.388	0.279

Table 6.C: Impact of Conflicts on Linguistic Fractionalization (1400 – 1600 CE)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS.	0.113*	0.399**	0.311***	0.268**	0.259^{*}	0.282^{*}
	(0.0477)	(0.126)	(0.0440)	(0.0735)	(0.116)	(0.102)
MUS.MUS.	0.161***	0.150^{*}	0.183*	0.244*	0.248	0.0699
	(0.0169)	(0.0655)	(0.0817)	(0.0956)	(0.134)	(0.0546)
CHR.CHR.	-0.0275*	0.0271	0.0199	0.0225	0.00736	-0.0617**
	(0.0101)	(0.0234)	(0.0185)	(0.0287)	(0.0406)	(0.0170)
MIDEAST	1.874***	0.766	0.434	1.207	2.122	9.039*
	(0.103)	(0.658)	(1.171)	(1.098)	(3.604)	(3.729)
BALKANS	6.563***	2.263	0.192	2.629	3.219	6.644***
	(0.390)	(2.669)	(3.410)	(3.598)	(4.794)	(0.388)
ISLAND	14.21***	10.99**	7.126	8.709	12.00**	19.65***
	(0.317)	(2.455)	(4.579)	(4.511)	(3.584)	(2.145)
POPDEN	· · · ·	13.80	11.31*	14.17 [*]	14.12*	· · · ·
		(7.200)	(4.173)	(5.323)	(5.995)	
MUS.MJR.		()	-1.730	-1.630	-1.660	
			(2.962)	(3.119)	(2.737)	
CHR.MJR.			2.811	3.311	2.851	
			(3.939)	(3.904)	(2.386)	
POPD1500			\	80,009	88,658	88,924
				(52, 437)	(66, 811)	(56, 462)
ROME					-2.15	-4.96
					(2.02)	(2.44)
JERUSLM					2.45	1.83^{-1}
					(3.30)	(2.25)
MECCA					-1.83	-2.30
					(3.92)	(1.95)
					× /	
Obs.	53	53	53	52	52	52
R-squared	0.678	0.765	0.786	0.799	0.819	0.747
S	tandard err	ors cluster	ed regional	ly (in pare	ntheses)	
*** p<0.01, ** p<0.05, * p<0.1						

Table 7.A: Impact of Conflicts on Polity Scores (1400 – 1900 CE)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE						
CHR.MUS.	0.113	0.356^{**}	0.267***	0.238***	0.208**	0.213**
	(0.0534)	(0.114)	(0.0542)	(0.0449)	(0.0509)	(0.0748)
MUS.MUS.	0.209***	0.158^{***}	0.204***	0.263***	0.258^{*}	0.123**
	(0.0364)	(0.0284)	(0.0209)	(0.0391)	(0.110)	(0.0416)
CHR.CHR.	-0.0431**	0.00676	-0.00419	-0.00524	-0.00381	-0.0553***
	(0.0119)	(0.0253)	(0.0164)	(0.0210)	(0.0355)	(0.00621)
RELIFRAC	2.500	0.578	0.969	1.379	-0.201	0.699
	(2.966)	(3.091)	(3.219)	(3.384)	(2.368)	(1.699)
ETHNOFRAC	-9.079**	-6.547^{*}	-6.863	-6.387	-5.560*	-7.077***
	(1.985)	(2.388)	(3.291)	(3.392)	(2.409)	(1.452)
LINGOFRAC	0.784	0.870	0.636	-0.489	-0.177	0.961
	(1.411)	(0.926)	(1.461)	(1.947)	(1.607)	(2.559)
POPDEN		9.355	5.901	8.084	9.521	
		(7.637)	(3.970)	(4.902)	(7.692)	
MUS.MJR.			-2.668	-2.832	-2.512	
			(2.521)	(2.593)	(1.970)	
CHR.MJR.			2.332	2.494	2.219	
			(3.432)	(3.519)	(2.614)	
POPD1500				64,755	$76,\!567$	$75,\!332$
				(53,767)	(76,015)	(56, 919)
ROME					-1.24	-3.37
					(2.63)	(2.06)
JERUSLM					-1.07	-0.452
					(2.20)	(1.83)
MECCA					-0.684	-0.381
					(2.38)	(0.516)
Obs	59	59	59	51	51	51
B-squared	0.7/1	0 703	0.818	0.830	0.845	0 788
r-squareu Q	tandard orre	ors clustere	d regionally	v.000 v (in parent	heses)	0.100
	***	$\frac{1}{2}$ $\frac{1}{2}$	* $n < 0.05$, un parent ' n∠0 1	ncocol	
p < 0.01, p < 0.03, p < 0.1						

Table 7.B: Impact of Conflicts versus Fractionalization on Polity Sc. (1400 – 1900 CE)

	(1)	(2)	(3)		
VARIABLE	INBORDER	POLITYCOUNT	POLITYAREA		
$CHRISTIANMUSLIM_{t-1}$	0.00136	0.0559	$-2.966e + 11^{***}$		
	(0.0334)	(0.0806)	(1.121e+11)		
$MUSLIMMUSLIM_{t-1}$	-0.0109	0.139	$9.316e{+10}$		
	(0.0567)	(0.137)	(1.983e+11)		
$CHRISTIANCHRISTIAN_{t-1}$	-0.0154	0.212^{***}	-7.704e + 10		
	(0.0209)	(0.0504)	(6.985e+10)		
$DEPENDENTVAR_{t-1}$	0.0762^{***}	0.192***	0.0254		
	(0.0135)	(0.0134)	(0.0172)		
YEAR1500	-0.180***	-0.0231	-7.539e+11***		
	(0.00984)	(0.0236)	(4.710e+10)		
YEAR1600	-0.136***	-0.0480**	4.880e+11***		
	(0.00987)	(0.0236)	(4.708e+10)		
YEAR1700	-0.111***	0.828***	5.512e + 11***		
	(0.00980)	(0.0215)	(4.030e+10)		
YEAR1800	-0.0748***	-0.0369	$1.386e + 12^{***}$		
	(0.00977)	(0.0236)	(4.415e+10)		
YEAR1900	0.312***	-0.0282	9.147e+11***		
	(0.00774)	(0.0236)	(4.024e+10)		
			· · · ·		
Obs.	7730	7730	5167		
R-squared	0.664	0.731	0.700		
Robust	standard errors i	n parentheses			
*** p<0.01, ** p<0.05, * p<0.1					

Note: Cell fixed effects included in all specifications but not shown.

(1)	(2)	(3)
INBORDER	POLITYCOUNT	POLITYAREA
-0.0115	0.157^{**}	$-3.255e+11^{***}$
(0.0336)	(0.0754)	(1.025e+11)
-0.0770	0.154	-2.863e+11*
(0.0494)	(0.111)	(1.569e+11)
-0.0325	0.322^{***}	$-2.366e + 11^{***}$
(0.0202)	(0.0454)	(6.150e+10)
0.137^{***}	0.365^{***}	-0.0864***
(0.0125)	(0.0113)	(0.0142)
-0.229***	0.605***	-1.240e+12***
(0.0110)	(0.0213)	(4.141e+10)
-0.184***	-0.0111	$1.991e + 12^{***}$
(0.0110)	(0.0241)	(3.157e+10)
-0.162***	0.0441^{*}	$1.945e + 11^{***}$
(0.0109)	(0.0242)	(4.483e+10)
-0.128***	0.00403	$-3.696e + 11^{***}$
(0.0109)	(0.0242)	(4.512e+10)
-0.0552***	0.0172	$4.747e + 11^{***}$
(0.0108)	(0.0242)	(4.184e+10)
0.353^{***}	0.320***	$-8.754e + 11^{***}$
(0.00872)	(0.0242)	(4.710e+10)
9276	9276	6457
0.607	0.676	0.646
dard errors in pa	arentheses	
o<0.01, ** p<0.0	5, * p<0.1	
	$\begin{array}{c} (1)\\ INBORDER\\ \hline \\ -0.0115\\ (0.0336)\\ -0.0770\\ (0.0494)\\ -0.0325\\ (0.0202)\\ 0.137^{***}\\ (0.0125)\\ -0.229^{***}\\ (0.0125)\\ -0.229^{***}\\ (0.0110)\\ -0.184^{***}\\ (0.0110)\\ -0.162^{***}\\ (0.0109)\\ -0.128^{***}\\ (0.0109)\\ -0.128^{***}\\ (0.0109)\\ -0.0552^{***}\\ (0.0108)\\ 0.353^{***}\\ (0.00872)\\ \hline \\ 9276\\ 0.607\\ \hline \\ 0.607\\ \hline \\ 0.607\\ \hline \\ 0.001, \math${\rm math${\rm math$	$\begin{array}{c ccccc} (1) & (2) \\ \hline INBORDER & POLITYCOUNT \\ \hline & 0.0115 & 0.157^{**} \\ (0.0336) & (0.0754) \\ & -0.0770 & 0.154 \\ (0.0494) & (0.111) \\ & -0.0325 & 0.322^{***} \\ (0.0202) & (0.0454) \\ 0.137^{***} & 0.365^{***} \\ (0.0125) & (0.0113) \\ & -0.229^{***} & 0.605^{***} \\ (0.0110) & (0.0213) \\ & -0.184^{***} & -0.0111 \\ (0.0110) & (0.0241) \\ & -0.162^{***} & 0.0441^{*} \\ (0.0109) & (0.0242) \\ & -0.128^{***} & 0.00403 \\ (0.0109) & (0.0242) \\ & -0.0552^{***} & 0.0172 \\ (0.0108) & (0.0242) \\ & 0.353^{***} & 0.320^{***} \\ (0.00872) & (0.0242) \\ \hline & 9276 & 9276 \\ & 0.607 & 0.676 \\ \hline & \text{dard errors in parentheses} \\ > < 0.01, \ ^{**} p < 0.05, \ ^{*} p < 0.1 \\ \hline \end{array}$

Table 8.B: Impact of Conflicts on Political Fragmentation (1400 – 2000 CE)

Note: Cell fixed effects included in all specifications but not shown.

	G	Rel. F	Rel. F	Mus/Chr	Mus/Mus	Chr/Chr
	Country	(1)	(2)	(3)	(4)	(5)
1	Afghanistan	.2717	2	0	0	0
2	Albania	.4719	8	8	0	0
3	Algeria	.0091	6	5	0	0
4	Armenia	.4576	2	2	0	0
5	Austria	.4146	32	8	0	0
6	Azarbeijan	.4899	2	1	0	0
7	Belarus	.6116	4	0	0	0
8	Belgium	.2127	16	0	0	0
9	Bosnia H	.6851	10	6	0	0
10	Bulgaria	.5965	8	6	0	0
11	Croatia	.4447	7	3	0	0
12	Cyprus	.3962	3	1	0	0
13	Czech R.	.6591	16	1	4	4
14	Denmark	.2333	12	0	0	0
15	Egypt	.1979	7	1	0	0
16	Estonia	.4895	5	0	0	0
17	Finland	.2531	3	0	0	0
18	France	.4029	97	0	14	14
19	Gaza Strip	.0342	1	0	0	0
20	Georgia	.6543	9	1	0	0
21	Germany	.6571	40	0	7	7
22	Greece	.1530	29	26	0	0
23	Hungary	.5244	12	3	0	0
24	Iran	.1152	16	3	0	0
25	Iraq	.4844	5	0	0	0
26	Ireland	.1550	16	0	6	6
27	Israel	.3469	1	1	0	0
28	Italy	.3027	93	1	0	0
29	Jordan	.659	0	0	0	0
30	Latvia	.5556	3	0	0	0
31	Lebanon	.7886	1	0	0	0
32	Libya	.0570	2	2	0	0

$\mathbf{Appendix}\ \mathbf{A:}\ \mathrm{Wars}\ \&\ \mathrm{Religious}\ \mathrm{Fractionalization}\ \mathrm{by}\ \mathrm{Country}\ \&\ \mathrm{Region}$

Appendix A: (continued)

	Constant	Rel. F	Rel. F	Mus/Chr	Mus/Mus	Chr/Chr
	Country	(1)	(2)	(3)	(4)	(5)
33	Liechtstn	.3343	0	0	0	0
34	Lithuania	.4141	6	0	0	0
35	Luxmbrg	.0911	1	0	0	0
36	Malta	.1223	3	3	0	0
37	Moldova	.5603	4	4	0	0
38	Monaco	.3047	0	0	0	0
39	Morocco	.0035	0	0	0	0
40	Netherlands	.7222	16	0	0	0
41	Norway	.2048	0	0	0	0
42	Oman	.4322	8	4	0	0
43	Poland	.1712	48	7	0	0
44	Portugal	.1438	19	0	0	0
45	Romania	.2373	24	15	0	0
46	Russia	.4398	92	25	0	0
47	San Marino	.1975	0	0	0	0
48	Saudi Ara	.1270	5	1	0	0
49	Slovakia	.5655	6	1	0	0
50	Slovenia	.2868	0	0	0	0
51	Spain	.4514	54	7	0	0
52	Sweden	.2342	28	0	1	1
53	Switzerland	.6083	23	0	3	3
54	Syria	.4310	9	0	0	0
55	Tunisia	.0104	3	2	0	0
56	Turkey	.0049	44	11	0	0
57	Ukraine	.6157	23	13	0	0
58	UK	.6944	64	0	3	3
59	Yemen	.0023	5	2	0	0

Source: Religious fractionalization data in column (1) are from McCleary and Barro (2006) and those in column (2) are from Alesina et al. (2003). The total number of violent conflicts by actor, listed in columns (3), (4) and (5), are from Brecke (1999).

Appendix B: Description of Variables

- FRAC: $\begin{cases}
 RELIFRAC : \text{Religious fractionalization of country } i \text{ in 2000.} \\
 ETHNOFRAC : \text{Ethnic fractionalization of country } i \text{ in 2000.} \\
 LINGOFRAC : \text{Linguistic fractionalization of country } i \text{ in 2000.} \\
 \end{cases}$
- POL: Religious polarization of country i in 2000.
- CHRISTIANMUSLIM : # of conflicts between Christians and Muslims in i from 1400 to 1900 CE.
- CHRISTIANCHRISTIAN : # of conflicts among Christians in *i* from 1400 to 1900 CE.
- MUSLIMUSLIM : # of conflicts among Muslims in *i* from 1400 to 1900 CE.
- CATHOLICPROTESTANT : # of conflicts between Catholics and Protestants in *i* from 1400 to 1900 CE.
- CATHOLICORTHODOX : # of conflicts between Catholics and the Orthodox in *i* from 1400 to 1900 CE.
- ORTHODOXPROTESTANT: # of conflicts between the Orthodox and Protestants in *i* from 1400 to 1900 CE.
- SHIASUNNI: # of conflicts between the Shi'a and the Sunni in *i* from 1400 to 1900 CE.
- DURATIONMC : Avg. duration in years of CHRISTIANMUSLIM; attains zero if latter is zero.
- DURATIONCC : Avg. duration in years of CHRISTIANCHRISTIAN; attains zero if latter is zero.
- DURATIONMM : Avg. duration in years of MUSLIMUSLIM; attains zero if latter is zero.
- DURATIONCP : Avg. duration in years of CATHOLICPROTESTANT; attains zero if latter is zero.

- DURATIONCO : Avg. duration in years of CATHOLICORTHODOX; attains zero if latter is zero.
- DURATIONOP : Avg. duration in years of ORTHODOXPROTESTANT; attains zero if latter is zero.
- DURATIONSS : Avg. duration in years of SHIASUNNI; attains zero if latter is zero.
- YEARMC : Avg. year of CHRISTIANMUSLIM; attains zero if latter is zero.
- YEARCC : Avg. year of CHRISTIANCHRISTIAN; attains zero if latter is zero.
- YEARMM : Avg. year of MUSLIMUSLIM; attains zero if latter is zero.
- YEARCP : Avg. year of CATHOLICPROTESTANT; attains zero if latter is zero.
- YEARCO : Avg. year of CATHOLICORTHODOX; attains zero if latter is zero.
- YEAROP : Avg. year of ORTHODOXPROTESTANT; attains zero if latter is zero.
- YEARSS : Avg. year of SHIASUNNI; attains zero if latter is zero.
- EQUATOR : Country i's absolute distance from the equator, in degrees of latitude.
- $\bullet\ LANDLOCK$: Dummy variable which indicates whether the country is land-locked.
- LANDAREA: Country *i*'s land area measured in km^2 .
- POPDEN: Population of country *i* in 1994 divided by *LANDAREA*.
- *POPDEN*1000 : Population estimate of country *i* in 1000 CE divided by *LANDAREA*..
- *POPDEN*1500 : Population estimate of country *i* in 1500 CE divided by *LANDAREA*..

• Geographic Region Dummies:	WESTERNEU CENTRALEU EASTERNEU NORTHERNEU BALKANS AFRICA ASIA MIDEAST
	MIDEAST SLAND

	JERUSALEM
• Distance from holy cities:	ROME
	MECCA