Isolating the Roles of Religion, Ethnicity, and Political Ideology in Mass Atrocities,1800-2020

By

Mukesh Eswaran*

Vancouver School of Economics
University of British Columbia

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Abstract

Religion, ethnicity, and political ideology all lend themselves to the perpetration of mass atrocities by creating a sense of identity that sets up an Us/Them dichotomy. Atrocities here are modeled as arising from the motive of acquiring territory but augmented by other-regarding preferences that capture the role of identity. My empirical results using data for the period 1800-2020 confirm that all these identity-driven motivators are associated with mass atrocities, with religion being more powerful than ethnicity. Monotheistic religions (with the strong exception of Judaism) are seen to be responsible for more mass atrocity deaths than (polytheistic) Hinduism, lending partial credibility to Hume's (1757) view on the intolerance of monotheism. While democracies commit fewer mass atrocities than autocracies, Christian liberal democracies do not. My statistical analysis rejects the popular presumption that Islam is more violent than Christianity. In fact, in the post-World War II era, Christianity seems to have been associated with the most mass atrocity deaths among the major religions. The results also show that mass deaths were higher in atrocities that took place in settler colonies, especially in the Post-WWII period of decolonization. Using mass atrocities as the metric of violence, the correlations found in the empirical work of this paper offer many new and surprising findings.

Key Words: Mass atrocity, ethnicity, religion, political ideology, war

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* Professor Emeritus. Email: mukesh.eswaran@ubc.ca

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1. Introduction

Among the greatest tragedies we have seen around the world in the past few centuries, and continue to see, are the episodes of mass killing. In the past century, there were anywhere from 60-150 million deaths (depending on the source and precise definition) due to mass killing, as opposed to 34 million battle deaths in civil and international wars (Valentino (2004)). Such episodes of mass killing take the form of genocides as their most extreme form.[1] The general aspects of genocides have been studied somewhat extensively by social scientists, and many theories have been proposed.[2] But there are numerous mass atrocities committed that do not qualify as genocides because, by definition, this requires the establishment of *intent* on the part of perpetrators and often this cannot be demonstrated. Nevertheless, such killings are often horrific. The purpose of this paper is to examine the factors that contribute to mass killings in general, which include but are not restricted to genocides. The regression analysis, however, establishes correlations and not causal relationships.

By the term 'mass atrocities' I include atrocities that not only include genocides but also the killing of civilians in war, the killing of POWs, the elimination of indigenous populations in colonies, the callous killings of groups or classes of people in order to achieve political goals or to implement economic policies, the willful neglect of policies that could save millions of lives as in famines, the killing by colonial masters in their colonies to retain their economic interest, and the murder of ethnic groups without announcing intention. To keep this project manageable, I only include atrocities where the death count per incident is at least 1,000.

The reasons for mass atrocities can be many, and we may suspect that each case could be idiosyncratic and depend on a particular and unique history, a particular set of circumstances, and a specific culture. There may be some truth in this view but, nevertheless, it is worthwhile to attempt to quantitatively examine whether we can identify a number of prime suspects that may contribute to these mass atrocities and to seek to separate out their effects or, at least, identify

[1] The UN Genocide Convention adopted in 1948 states that genocide means any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such: (a) Killing members of the group; (b) Causing serious bodily or mental harm to members of the group; (c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; (d) Imposing measures intended to prevent births within the group; (e) Forcibly transferring children of the group to another group.

[2] Insightful reviews are found in Straus (2007, 2012).

correlations. To minimize the effects of unique features of individual observations (a feature of all cross-sectional analyses), I control for as many variables as possible. Building on the work of scholars who have contributed to this endeavor, I attempt here to make a modest contribution to this field of study with a more comprehensive data set and a different set of questions.

I motivate my analysis by the study of Esteban, Morelli, and Rohner (2015) that clearly brings out the importance of resources in mass atrocities. They showed theoretically and empirically (using data from the period 1950-2000) that there are compelling strategic reasons for mass atrocities that depend of the relative abundance of natural resources to non-natural resources and the relative populations of an ethnically divided country. In this paper, I investigate the role played by identity in mass atrocities, by augmenting the grab for resources. I add the role of religion and political ideology to the analysis. I also use data over a 200-year period, and so my data set is larger, though I am constrained in the variables for which I have data.

For mass atrocities to take place, there must be trenchant divisions by groups that identify as 'us' and those they identify as 'other'. The proclivity for making such distinctions was probably generated by evolution. Humans evolved in small groups, and in an early stage of evolution the capacity to make such distinctions served a survival function that seems to have been subsequently embedded as an innate proclivity (Bowles (2009), Eaton, Eswaran, and Oxoby (2011)). But what could serve as sources of the cleavage between 'us' and 'them', however, may be numerous. Whatever is seen as a threat to a perceived in-group from a perceived out-group can serve to trigger hostile responses that may well lead to mass killings if the enabling circumstances prevail.

The role of religion in mass atrocities per se has received relatively little attention, as far as I am aware.[3] Most studies focus on specific episodes that point to religion as an instigator and tend to be descriptive, though there are a handful of excellent in-depth studies that look at repression and persecutions towards specific ethnic or religious groups.[4] To keep the scope of my project manageable, I focus here exclusively on mass atrocities. An early statistical study that examined mass killings in wars is that of Richardson (1960). Drawing on data he collected over the period

[3] An important exception is the work of Reynal-Querol (2002) in the context of the incidence of civil wars.
[4] For example, Voigtlander and Voth (2012) and Anderson, Johnson, and Koyama (2017) on antisemitism in Europe, Grosfeld, Sakalli, and Zhuravskaya (2020) on antisemitism in Russia, and Mitra and Ray (2014) on repression of Muslims by Hindus in India.

1809-1949, he found that was a positive correlation between the differences in religions and the frequency of wars. The time is ripe for another statistical study that examines the role of religion in mass killings of wider scope, an expanded data set, and with controls for other determinants. I identify the majority religion of the perpetrators of the mass atrocity and also the majority religion of the victims. Because even a single mass atrocity is rarely mono-causal, to isolate the effect of religion, of course, we have to also control for all the other factors that contribute, some of which are of considerable importance and interest in themselves.

Ethnic cleavages, of course, could also an important contributing factor in mass atrocities, and this has been most studied in the context of civil wars but, recently, also in the context of wars between countries (Fearon and Laitin (2003), Spolaore and Wacziarg (2016)). Examples of ethnically-driven mass atrocities are the Rwandan genocide in 1994 and, certainly, the Holocaust of the Jews in Germany in 1939-45. We may suspect that ethnic difference is likely one of the earliest instigators for mass killings, arising well before the emergence of the major religions and, certainly, prior to the formation of modern states. So it is important to account for the contribution of ethnic differences in a quantitative study of mass atrocities.

The role of the political ideology in mass killings is naturally a matter of great importance. It could occur, for example, if the goal is to prevent the spread of communism, as in the U.S. involvement in Vietnam and Cambodia. Or, it could be for the prevention of the spread of democracy, as in the Soviet involvement in Afghanistan. This political motivation can be bolstered by religious ideology—such as the belief in freeing the world from atheistic communists, for example.

There has been a fair amount of work examining the question of whether democracies result in fewer violent conflicts (e.g. Rummel (1995), Easterly et al (2006), Downes (2007)). It has been claimed that democracies have fewer military aggressions against other democracies (Rummel (1995)). However, the extent of hostile interactions between democracies and countries with other political regimes is unclear (Gibler and Owsiak (2018), Reiter (2017)). Mann (2004) has argued through detailed case studies that democracy has a dark side whereby genocides and ethnic cleansing may arise if the class system is not stable. In any case, the issue of whether democracies reduce or raise the likelihood of mass atrocities both within and across borders is a question that could be subjected to more statistical analysis.

Political ideologies can motivate mass atrocities also in confluence with economic interests. The relatively recent genocide in Rwanda shows how the need to acquire power, and ultimately resources, can induce mass killings if this is expedient (Rogall (2021)). When such atrocities are inflicted on foreign populations, it could also be for strictly ideological reasons. The U.S. intervention in Vietnam, Cambodia, Laos, and other countries are example of this.

The approach I take here is that economic interest plays an important, but certainly not exclusive—and perhaps not even the primary—role in mass atrocities. In such an approach, as in Esteban, Morelli, and Rohner (2015), the economic objective of a group that commits such atrocities is to acquire resources either by appropriating them from other groups or by eliminating the competition for resources. In this endeavor of appropriation, the effort can be aided by hostilities that arise from differences in ethnicity, religion, and political ideology. This works through the dehumanization of the enemies that such differences facilitate.

Dehumanization plays an essential role in mass killings (Fein (1993), Chirot and McCauley (2006, Ch.2)). In fact, it plays a dual role in genocides and mass atrocities in general (Savage (2013)). First, it legitimizes mass atrocities by dealing with the cognitive dissonance arising from the actions of killing innocents and the belief that murder is repugnant.[5] This repugnance is diluted by the claim that the victims are subhuman. Often, but not always, dehumanization also provides a motivation and justification for engaging in mass atrocities. In my simple theoretical model, however, I take the motivation to be economic—it is the appropriation of land or the assets of the victims—but it is augmented by other-regarding preferences that capture the sort of repugnance that comes from ethnic and religious cleavages and political ideologies.

A great deal has been written about religious violence in the non-economics literature. Some scholars have pointed to monotheistic religions as being especially prone to religious violence. Hume (1757/2010) was a proponent of this view, and favored polytheism to monotheism.[6] The sociologist Stark (2001) has argued that monotheism, because its adherents are persuaded that they have laid hold of the one true God, is prone to violence. More recently, Iyigun (2015) has

[5] On the idea of cognitive dissonance, see Festinger (1957).
[6] For example, Hume (1757/2010, Sec. IX) claimed, "The intolerance of almost all religions that have maintained the unity of God [monotheism] is as remarkable as the contrary principle of polytheists… I may venture to affirm that few corruptions of idolatry and polytheism are more pernicious to political society than this corruption of theism…when carried to the utmost height."

argued that, while monotheism lends social and political stability, it also increases conflicts. He substantiates the claim on conflicts, which is the focus here, with an analysis of those between the (Muslim) Ottoman Empire and (Christian) European countries. Schwartz (1998), too, has powerfully argued that monotheism lends itself to violence. An important point she makes, which overlaps with the general view I adopt here, is that religion creates an identity that tends to exclude others. This exclusiveness in the definition makes religious people more open to inflicting violence against the others.

However, I go further than Schwartz (1998) and Iyigun (2015) on religion and conflict. If shared identity is a cause of violence then, when these values or interests are threatened, it is conceivable that non-monotheistic religions, too, can lend themselves to violence. In fact, since atheism also contributes to the identity of its adherents, atheists may be vulnerable to the same tendencies towards violence, too. Therefore, atheism may also be classed as a separate, non-traditional "religion"—the religion of atheism.[7] A relevant comparison across religions, then, could be between monotheistic, non-monotheistic religions, and atheism. Whether monotheism tends to be more violent than the others is an empirical question.

Political ideologies are yet another source of identity. Some of the worst mass atrocities have been conducted by communist countries, in which the victims were members of various classes. Stalin's purge of the landowners (*kulaks*) in the 1930s is but one example among many. Identification with particular classes can give rise to hostilities that end in mass atrocities. However, democracies, too, are prone to this tendency. In fact, even liberal democracies have had mass killings (Mann (2004)).

I take the view that *all* shared identity can contribute to the violence involved in mass atrocities.[8] I agree with Schwartz (1998), who claims that all identity—because it necessarily creates an 'other'—is prone to violence.[9] Mass atrocities can arise irrespective of whether the 'other' is construed in religious terms ("Muslims") or ethnic terms ("Tutsis") or in class terms ("kulaks"). Empirically studying the phenomenon of mass atrocities by focusing on any one or two of these

[7] This broader view of religion is consistent with that of Richardson (1960) in his early study of the connection between war and religion, among other things.
[8] The first recognition of the importance of identity in the economics literature was by Akerlof and Kranton (2000).
[9] In fact, her view is stronger: "Violence is not only what we do to the Other. It is prior to that. Violence is the very construction of the Other" (Schwartz (1998, p. 5)

may result in biased estimates because of omitted variables. So it is important to examine all of these simultaneously in the same study so that we can attempt to correctly isolate the effect of each. A framework based on identity as the common unifying theme is the conceptual approach I adopt here.

These, then, are the foci here as potential determinants—or, at least, correlates—of mass atrocities: political ideologies, racial or ethnic cleavages, and religious beliefs. From the perspective of analyzing events of mass killing over two centuries, I am limited by the kind of data that is available. To examine their potential contributions, I have been immensely aided by the earlier data sets put together by scholars. I have also gathered data from published sources of all events since 1800 in which mass killings by events that resulted in more than 1,000 deaths. Sometimes, the duration of the events lasted but a few months, but at other times they lasted years. This paper attempts to separate out the correlations between these determinants and the number of casualties after controlling for other variables, to the extent possible. With one exception, I do not investigate the role of these factors on the incidence of mass atrocities. The focus of this paper is on their role in the intensity of mass atrocities conditional of their occurrence.

In the study of the above correlates of deaths in mass atrocities, it is important to control for technological differences between perpetrators and victims. Technology has greatly increased the ease with which mass atrocities can take place and so has increased the magnitudes of casualties. Technological improvements in weapons have facilitated this not only by improving the efficacy of killing but also by distancing the perpetrators from the act of killing, thereby making it easier to execute actions that are abhorrent (Markusen (2000)).

Another control of specific and independent interest is whether the mass atrocities involved colonies or settler colonies. This is an aspect of atrocities that has been little studied in the literature. In particular, the economic development of settler colonies has been intensively studied after the pioneering work of Acemoglu, Johnson, and Robinson (2001), but whether these settler colonies experienced any more or any less by way of mass atrocities than non-settler colonies has received far less attention. My paper provides some evidence on this question.

Various other controls for population sizes and population densities of the perpetrating countries, the duration of the event of mass killing, the legal origins in the perpetrating countries, whether the mass killing occurred during wartime, or during local wars, whether they were across country conflicts or within countries, etc. These are controls I use to minimize the effects of idiosyncratic factors.

In summary: In this paper, the analysis shows that greater democracy tends to reduce mass atrocities, except in the post WWII period. Ethnic differences tend to be positively correlated with deaths in mass atrocities that are targeted (what I call 'group-selective') but not with other type of mass atrocities. Religious difference, in contrast, tend be always positively correlated with mass fatalities. Among monotheistic religions, Christianity is not significantly different from Islam in its correlation with mass atrocity deaths. The correlations of Hinduism and Judaism with mass atrocity deaths are consistently negative and significant (compared to Islam). Therefore, though Hume's conjecture seems to have some validity, it does *not* uniformly apply to all the monotheistic religions. In the post WWII era, Christian democracies are associated with more mass atrocity deaths than non-Christian democracies. Settler colonies also show a positive correlation with mass atrocity deaths, especially in the post-WW II of decolonization.

The next section outlines a simple theoretical framework to motivate the empirical analysis that follows. Section 3 describes the data I use. Section 4 shows some broad features of found in the data. Section 5 outlines the empirical strategy employed in this paper. In Section 6, I present the main empirical results in a number of subsections. In subsection 6.1 examines the determinants of what I call 'group-selective mass atrocities'—targeted atrocities that do not all quite qualify as genocides because evidence of intent is lack. In subsection 6.2, attention is devoted to examining mass atrocities pertaining to the five major religions. In Section 6.3, mass atrocities in the post-World War II period are examined. Finally, in subsection 6.4 the analysis is done for all religions, using the sample from the 20th century onwards. Discussion of some phenomena pertaining to mass atrocities and concluding thoughts are presented in Section 8.

2. A Simple Theoretical Framework

I sketch here a simple model that lays out a conceptual framework for approaching an understanding of mass killings. This is most certainly not intended as a general model for

predictions of all mass atrocities, which is a phenomenon that is so varied in nature that it does not lend itself to easy theorization. Rather, the purpose of the model is to merely provide a conceptual aid to make sense of the empirical work that follows, which is the main focus here.

I take the view that political ideologies, racial or ethnic cleavages, and religious beliefs can, and do, instigate mass atrocities because a group's economic interest can be facilitated by other-regarding preferences that confer the ability to dehumanize opponents.[10] Such preferences often sharpen during conflicts.[11] I focus on territorial conflicts because ideologies—whether political, ethnic, or religious—typically require some territory to embody it. But this is not to deny that non-territorial conflicts can and do exist.[12]

Suppose two countries or groups within a country, labeled One and Two, are in conflict over resources. Let us say that an indivisible piece of land worth *Z* is the prize that they seek. They compete for it in a conflict or war by expending resources, x_1 and x_2, respectively. The probabilistic resolution of the conflict is determined here by a variant of the standard Tullock (1980) model. We assume that One may have technological superiority or greater fighting capacity relative to Two. I capture this by normalizing one unit of Two's effort to be 1 effective unit whereas 1 unit of One's effort is θ (≥1) effective units. The opportunity cost of effort is taken to be 1 for both groups. The parameter θ is One's relative advantage in technology or fighting capacity. The probabilities, P_1 and P_2, of One and Two winning the piece of land are given, respectively, as in Eswaran and Neary's (2022) variation of Tullock's model, by

$$P_1 = \frac{\theta x_1}{\theta x_1 + x_2}\ ;\ P_2 = \frac{x_2}{\theta x_1 + x_2}. \tag{1}$$

A second, and important, variation from the standard Tullock model that is introduced is the fact that preferences embody more than one's own resources; the preferences are other-regarding (Eswaran and Neary (2022)).[13] The resource in the hands of the opponent is a source of disutility rather than one of indifference. This captures the fact that preferences draw a distinction between

[10] See Haslam and Loughnan (2014) for a review of the literature on dehumanization.
[11] See Sekulic (2006) for evidence from the mass atrocities in Yugoslavia.
[12] See de la Calle and Sánchez-Cuenca (2012), for example, on non-territorial insurgencies within countries.
[13] This aspect of my framework responds to the point made by Fein (1993, pp. 99 -100) that there is need of a theory that incorporates ethnic and ideological considerations in a model that incorporates other conditions that facilitate genocides.

"Us" and "Other", and the distinction can come from several sources (see Eaton, Eswaran, and Oxoby (2011)). It could arise here because the two opponents have different ethnicities, or different religions, or different political ideologies. The strengths of these preferences of One and Two are captured by the parameters $\beta_1 (\geq 0)$ and β_2 (≥ 0), which can be referred to as 'spite,' which can manifest as animosity, hate, dehumanization, etc. It is possible, however, that the extent to which ethnic and religious spite manifests may be influenced by governance; good governance may temper these effects with the kind of institutions that ameliorate hostilities.

The objective function of One in this conflict over the resource worth *Z* may thus be written, in expected value terms,

$$max_{x_1} \;\; P_1 Z - \beta_1 P_2 Z - \; x_1,$$

that is,

(2) $$max_{x_1} \;\; \frac{\theta x_1}{\theta x_1 + x_2} \; Z - \beta_1 \frac{x_2}{\theta x_1 + x_2} Z - \; x_1.$$

The second term in the objective arises from the fact that Two's expected gain lowers One's utility beyond indifference.

Likewise, for Two the objective is

(3) $$max_{x_2} \;\; \frac{x_2}{\theta x_1 + x_2} \; Z - \beta_2 \; \frac{\theta x_1}{\theta x_1 + x_2} Z - \; x_2.$$

The respective first order conditions under Nash conjectures are

(4a) $$\frac{\theta(1+\beta_1)}{(\theta x_1 + x_2)^2} x_2 Z = 1,$$

and

(4b) $$\frac{\theta(1+\beta_2)}{(\theta x_1 + x_2)^2} x_1 Z = 1.$$

From (4a) and (4b), it follows that, in the Nash equilibrium, it must be the case that

(5) $$x_2 = \; x_1/\gamma,$$

where $\gamma \equiv (1+\beta_1)/(1+\beta_2)$, which can be interpreted as a measure of the out-group spite of One relative to Two. The effort of Two will exceed that of One if and only if One's relative spite is less than 1. Writing (5) as $x_2 = (\theta x_1)/(\gamma\theta)$, we see that Two's effective effort will exceed One's effective effort if $\gamma\theta < 1$, that is, the spite of Two has to be large enough compared to that of One that it offsets the effect of One' technological advantage. Just as technological superiority confers an advantage in warfare, so does spite: it induces the group to apply more effort.

Substituting (5) in (4a) or (4b), we obtain the Nash equilibrium effort levels, x_1^* and x_2^*:

(6) $$x_1^* = \frac{\theta\beta_2(\beta_1)^2}{(\theta\beta_1+\beta_2)^2}; \quad x_2^* = \frac{\theta\beta_1(\beta_2)^2}{(\theta\beta_1+\beta_2)^2}.$$

It is easily verified that, in the Nash equilibrium, the probabilities of winning, P_1^* and P_2^*, are:

(7) $$P_1^* = \frac{\gamma\theta}{\gamma\theta+1}; \quad P_2^* = \frac{1}{\gamma\theta+1}.$$

Thus One has a higher probability of acquiring the resource *Z* if and only if $\gamma\theta > 1$, that is, if the product of One's technological/capacity advantage and spite exceeds 1. We may think of the composite parameter $\gamma\theta$ as the relative "conflict advantage" of One.

So far, nothing has been said about civilian casualties in the model. It is reasonable to posit that, as long as civilians are not explicitly targeted, the number of civilians of a country who die as collateral damage would be an increasing function of its own population size and its opponent's effective effort. Denote One's and Two's civilian population sizes by N_1 and N_2, respectively, and their casualties by C_1 and C_2. We may posit that

(8) $$C_1 = kN_1x_2^*; \quad C_2 = kN_2(\theta x_1^*).$$

Then the ratio of the proportion of Two's civilian population who die as casualties to the proportion of One's civilian population who die, *R*, is given by

(9) $$R = \frac{C_2/N_2}{C_1/N_1} = \frac{\theta x_1^*}{x_2^*} = \theta\gamma.$$

Thus a larger proportion of Two's civilian population dies as collateral damage if One's conflict advantage (arising from technological superiority and the spite from political ideology or ethnic preferences or religious animosity) exceeds 1.

But when do civilians get deliberately targeted? Since mass civilian killings frequently occur during wartime, it is reasonable to accept the view that the norms of war as in the 1907 and 1949 Geneva Conventions—which prescribe the (unenforceable) rule that civilians should not be intentionally targeted—are relaxed on the pretext that targeting is inevitably inaccurate. It is this that can be construed as mass atrocity if a sufficiently large number of civilians are killed. The main reason for deliberate violation, of course, is strategic: to bring a quicker end to the war (Valentino et al (2006)). But there may be ethnic and religious and political considerations also that weigh in on the choice to pursue such a course.

Though I do not pursue the analysis in detail here, it is easy to see how a strategic motivation for mass atrocities can be captured in my model. As argued by Valentino et al (2006), the production of arms and ammunitions for the soldiers is typically done by civilians during a war. By killing civilians of Two, One would be reducing Two's capacity for fighting and increasing its own technological/capacity advantage, that is, θ will increase. This will increase One's chances of winning. And expression (7) reveals that this technological advantage could be augmented by One's relative spite (γ).

I note one point pertaining to the role of religion. If it is indeed the case that, as Hume (1757/2010) suggests, monotheistic religions are more prone to violence than polytheistic ones, if country One is monotheistic group and confronts a polytheistic country Two, One would be under a clear advantage, all else constant, because the "Us v. Them" mindset is more entrenched and less tolerant. Then, country Two would not be able to defend itself as easily, would also be more vulnerable, and would experience a higher proportion of civilian deaths (because the parameter γ would be greater than 1). It is easy to see from expressions in (6) and (8) that the number of civilian casualties of Two is increasing in β_1 and in the ratio β_1/β_2. One would expect that the population of Two would also be more vulnerable to conversion by coercion.[14]

[14] In his systematization of Richardson's (160) work, Wilkinson (1980, p. 90) observes the peacefulness of China before 1911 and remarks, "If Confucianism pacified China, it may also have made the Chinese less able to resist foreign attack or to repel attempts to reinstruct them by force."

Likewise, if the two contenders both subscribe to monotheistic but different religions, the confrontation would be more frequent and more intense.[15] If we are willing to reasonably posit that the spite towards a group of the same religion but different denomination (as in Protestantism and Catholicism) is not as intense as that between two different religions, we can also understand why the expansion of the (Muslim) Ottoman Empire reduced confrontations between European Catholics and Protestants, as demonstrated by Iyigun (2008).

It is empirically found that ethnic hostilities intensify during conflict, even if they were only mild before (Sekulic (2006)). We can conceptualize such a scenario by setting $\beta_1 = \beta_2 \approx 0$ before the conflict but both becoming positive during the war. In such a case, a new possibility can arise: private citizens and civilians can be recruited to participate in what amounts to mass killing in aggregate. Such participation is well documented in the Armenian and the Rwandan genocides (Rogall (2021)). For this to be successful, ordinary people have to be made to overcome their inhibitions to killing neighbors, friends, and even relatives by blood in case of mixed marriages. This requires a concerted effort by the state's elite at either coercion or persuasion. Whether or not mass killing of civilians will transpire depends on the costs of mobilizing civilian support, which in turn depends on the intensity of the ethnic or religious or political hostility. It also depends on the relative sizes of ethnic groups.

Also, in intrastate conflicts, if the population is relatively homogeneous mass killings are unlikely in civil wars because ethnic cleavages are not part of the equation. At the other extreme, if ethnic fractionalization is very high, then too we would not expect mass killings because the numbers are too small: the ethnic advantage of enforcement through punishment for noncooperation is not there (Lyall (2010)). Thus, in civil wars, we would expect mass killings to be non-monotonic in ethnic fractionalization—rising first and then decreasing, as Horowitz (1985) has argued, though not necessarily for these reasons. The emergence of conflicts may also depend on the degree of polarization that prevails in the country (Esteban and Ray (1999), Reynal-Querol (2002)). Historic animosity, no doubt, may also contribute to this possibility.

[15] Richardson (1960) does find that (monotheistic) Christianity and Islam are associated with a high percentage of the wars between 1809 and 1949, and quite often against one another. Christianity also exhibits considerable intra-faith conflicts, but not Islam.

The prized territory may also be a colony. In this case, the contested resource can either be accompanied by settlers or one which the colonizers wish to exploit for its resources but without the intention of settling. One thing seems clear: during the appropriation of the land as a colony, there may well be mass atrocities. Settler colonialists will be more likely to perpetrate genocides when the land is being seized for own use after settling (Wolfe (2006)). But after appropriation, better institutions that may be put in place à la Acemoglu et al (2001) may result in fewer mass atrocities. We are more likely to observe mass atrocities in settler colonies during decolonization because the colonial masters have more to lose than during the status quo.

There are many avenues available to the state or to groups in perpetrating mass atrocities. One that is used fairly often, and not always in wartime, is the deliberate use of famine. In this view, whether it is inadvertent civilian casualties or deliberately targeted civilians in warfare, it is likely that ethnicity, religion, and political ideologies are potentially implicated in mass atrocities. In the next section, I turn to the data I use in my empirical investigation.

3. The Data

I describe here the data I employ in my analysis. The atrocities I include in my definition of mass atrocities are listed in the second paragraph of the Introduction. The crucial variable, or a transform of which, that is the main dependent variable in the analysis is the number of deaths in an event of mass atrocity when the number dead exceeds 1,000. In this I most certainly include genocides, but the scope here is broader. Whether or not the elimination of an ethnic group was explicitly intended, all deaths of civilians of sufficient magnitude that are the result of deliberate human actions are included. I exclude military deaths because, arguably, soldiers kill their enemies in war, and are expected to, as a matter of duty. But I include deaths of civilians as a measure of inhumanity in conflicts; the killing of POWs (which goes against well-established conventions like the 1907 and 1949 Geneva Conventions); deaths due to starvation during famine when the results were foreseen but action was deliberately not taken; and civilian deaths produced by deliberate starvation even in wartime. I use the numbers provided by scholarly studies and by reputable institutions, avoiding the use the official statistics of the governments of the relevant countries because they may tend to underestimate or to overestimate the casualties for political reasons.

Some of these mass atrocities were directed towards select groups but, as mentioned earlier, because there is little evidence of deliberate intent, they do not qualify as genocides according to the UN Genocide Convention (the criteria for genocide I have listed in footnote 1). So I have coded these as 'group-selective mass atrocities' or GSMA for short.[16] To code these as such, I have consulted the history of each of these potential events to identify whether there was deliberate targeting of ethnic, religious, or political groups and, as is inevitable, used my own judgement.

In my data collection, I have been enormously aided by previous compilations in Easterly, Gatti, Kurlat (2006), Ulfelder and Valentino (2008), Anderton et al (2016), those of White, the Political Instability Task Force (PITF) datasets, and the *Minorities at Risk* dataset.[17] (Some of these sources, however, cover no more than the past 75 years.) Helpful as these sources have been, I have not directly downloaded data from any of them. Rather, I usually took their cited instances of mass atrocities or wars as my cues to independently follow up with my own search on the history of the atrocities and estimates of the casualties. In any addition, I added atrocities that may have been missed in some previous datasets and added many more observations as per my inclusive definition of mass atrocity and the extended period (220 years) that my data covers. To the extent possible, I have consulted the history of every incident included so as to use my own judgement as to whether it fits my listed criteria of belonging to the dataset and I recorded the sources of the estimates I use. My dataset, therefore, is not a general purpose one but is one that is tailored for the specific research questions that I have sought to address.

As many scholars have suggested, reasonably, the exact numbers involved in an atrocity will never be exactly known. Therefore, apart from generally opting for the estimate in the most authoritative source available, I have striven for *inclusiveness* in the data in terms of incidents rather than trying to identify the exact number of casualties. The attempt here has been to be very inclusive so as not to bias the results through sample selection. The only explicit omissions in my dataset that I am aware of are those of ISIS, left out because unavailability of satisfactory data. In

[16] This concept is somewhat analogous to the concept of 'targeted mass atrocities' of Butcher et al (2020) in the sense that I, too, consider targeting by ethnicity, religion, and political ideology. However, I refer to my concept of this as 'group-selective mass atrocities' because I have included deaths of POWs, deliberate famines, etc. in my definition of mass atrocity.

[17] The last three references can be found at be sites http://necrometrics.com/index.htm; http://www.systemicpeace.org/inscrdata.html; and http://www.mar.umd.edu/mar_data.asp. The last, however, does not give estimates of casualties that I can use.

my dataset, there are in all 363 occurrences of mass atrocities since 1800 with casualties at least as large as 1,000. Where there are several estimates with large variations for the same event, I have used the average values of these but I dropped obvious outliers in the computation. Often, I have used what seems to be the consensus opinion of scholars. Furthermore, I record the total mass death inflicted in the incident, but the duration of the incident is controlled for in the analysis.

To identify the religions of the perpetrators and the victims, I have used the majority religion prevailing in the country at the time of the atrocity. Usually, there is little ambiguity about this but, where required I have consulted sources like Barrett (1982). When the victims are in the same country, sources usually identify their religion. The focus here is on the five largest religions in the traditional sense: Christianity, Islam, Judaism, Hinduism, and Buddhism. The first three, of course, comprise the world's great monotheistic religions, while the latter two are best characterized as non-monotheistic. Of these, Hinduism is deemed to be polytheistic.[18] Buddhism is also non-monotheistic and the practice of Buddhism seems open to polytheism.[19] I do not subdivide these five religions into their various denominations (like Catholic/Protestant, or Sunni/Shia, etc.). Other religions like Shintoism, Taoism, Sikhism, numerous tribal and animistic religions are collectively dubbed "Other" religions. All of them, with the exception of Sikhism, are non-monotheistic.

In determining the majority religion of a country at the time relevant to an event, I have also allowed for one important departure from the standard notion of religion. We have seen that, in the approach adopted here, violence is seen through the lens of identity, of which both religion and irreligion (atheism) may be contributors and so should be treated on the same footing. Therefore, I have created a special non-traditional, religious category called "Communism". This approach is quite appropriate because we may take communism, too, as a belief system just as the traditional religions.[20]

[18] Though, strictly speaking, Hinduism claims a single ultimate Reality that is consistent with polytheism in practice.
[19] Despite the fact that the Buddha did not speak of God at all.
[20] McFarland (1998) shows that there are parallels between fundamentalist Christian and fundamentalist communist orientations in terms of the discrimination they induce towards specific targets. Likewise, an orientation of "quest"—an open minded inquiry—is similarly free from the need to discriminate in both Christianity and in communism. Thus, there are "genotypic" psychological laws associated with belief systems in general, McFarland

To capture ethnic differences between perpetrators and victims, I use the classification of Cavalli-Sforza et al (1994) comprising 42 ethnic groups across the world. I focus on the majority ethnic group in each country. I construct a 0/1 dummy variable for ethnic differences between the two groups in conflict and this is what I use most frequently.[21] The genetic distances between the majority ethnic groups can also be obtained from Cavalli-Sforza et al (1994, p. 75). By construction, these genetic distances were those between ethnic groups as they prevailed in 1500 CE.[22] However, since the theory pertains to ethnicity differences, the dummy variable is what I have deemed as most appropriate for the analysis of the ethnicity aspect of this paper.

To capture the role of politics, I use the polity index (Polity IV and Polity V) employed by political scientists. This index, which measures the extent of democracy exhibited by the government, is put on a 21-point scale from −10 (complete autocracy) to +10 (ideal democracy) as characterized by various criteria. It is available for 167 countries to 1800. It is also convenient to use the categorical grouping of countries: "autocracy" (−10 to -5), "anocracy" (−4 to +5) and "democracy" (+6 to+10).[23] For my analysis, I have transformed the polity number into a polity index that goes from 0 (complete autocracy) to 1 (ideal democracy)

I have a dummy variable for mass atrocities that accompanied conflicts that were territorial in nature, as gauged by the history of the event.

On incomes and populations, I have used figures from Angus Maddison and the Maddison Project. From the land areas of the various countries, I have calculated the population densities.

In order to capture technology differences between the perpetrators and the victims (represented by the parameter θ in the model), I take the ratio of the per capita incomes of the respective

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proposes, and these manifest as phenotypes in specific belief systems. This suggests that we can treat communism as a religion.

[21] It might appear that ethic difference dummy for within country atrocities will be set to 0 by construction. This is not so. Ethnic differences in mass atrocities countries in most continents are well-documented, and I use these in setting up the dummy variable. The most problematic continent is Africa, but even here I use information on ethnic differences that conform to Cavalla-Sforza's classification. In a few cases, however, it is possible that there were ethnic differences but the dummy is set to 0 because both groups have been assigned the same (majority) ethnicity.

[22] See the useful discussion in Spolaore and Wacziarg (2016) on this.

[23] For details and further links, consult the site https://www.systemicpeace.org/polityproject.html

countries. If the mass atrocity is intrastate, this ratio will be equal to 1—which is not unreasonable because we can expect both groups to have access to the same technology.[24]

Other controls include legal systems of the countries of the perpetrators. These are broadly common law, civil law, Islamic, and occasionally some combinations of these.[25]

4. Preliminary Empirics

I first paint some general features of the data with a broad brush in this section. Typically, I analyze the data by three periods: the full sample (1800-2020), 20th century onwards (1901-2020), and the post Second War period (1946-2020). The data from the 20th Century onwards is somewhat more refined and more disaggregated by ethnicity and religion, and therefore, more informative than the 19th Century data. For example, the total number of Jewish Holocaust victims was approximately 6 million, but I disaggregate the genocidal event by where and when it happened because the Jews were also killed in occupied territories where the majority populations had different ethnicities than those of the Germans. This information on ethnicities and religions is required for my analysis. In religion, I focus on the 5 major traditional ones but, as mentioned, in this study I do not draw a distinction between various denominations of the same religion, such as Protestants, Catholics, and Eastern Orthodox Christians, and I also include "Communism" as a separate religion for comparison.

Table 1 shows the distribution of mass atrocities and group-selective mass atrocities for intrastate (domestic) and interstate observations. We see that the incidence of mass atrocities in domestic cases is around twice that of interstate cases. Group-selective mass atrocities, however, are thrice as frequent in domestic cases than in interstate cases.

[24] This is not to deny that income differences do exist between ethnic groups in the same country, but I am constrained by the limited data.
[25] The category called "customary law," which never appears alone but invariably with one of the three listed above, is dropped as a separate category.

Table 1: Table for Distribution of Domestic and Interstate Mass Atrocities

	1800-2020		1901-2020		1946-2020	
	Mass Atrocities	Group-Selected	Mass Atrocities	Group-Selected	Mass Atrocities	Group-Selected
Intrastate	229 (63.09%)	58 (76.32%)	210 (66.25%)	55 (79.71%)	141 (71.57%)	18 (72%)
Interstate	134 (36.91%)	18 (23.68%)	107 (33.75%)	14 (20.29%)	56 (28.43%)	7 (28%)
Total	363	76	317	69	197	25

Table 2 shows the number of occurrences of ethnic and religious differences in the sample, by the kind of conflict.

Table 2: Table for Ethnic & Religion Differences in Conflicts

Conflict Type	No. of Obs.	Only Ethnic Diff.	Only Religion Diff.	Both Diff.	Neither Diff.
Full Sample	363	64 (17.63%)	37 (10.19%)	131 (36.09%)	131 (36.09%)
Intrastate	229	23 (10.04%)	23 (10.04%)	66 (28.82%)	117 (51.09%)
Interstate	134	41 (30.60%)	14 (10.45%)	65 (48.51%)	14 (10.45%)

A higher percentage of interstate mass atrocities involve only ethnic differences than in intrastate atrocities. In more than 50% of the within-country mass atrocities, neither ethnic differences nor religion differences are involved. This suggests that these are more likely to be motivated by political differences than interstate ones and, therefore, may possibly be triggered by economic considerations like inequality, discrimination, etc.

Table 3: Mass Atrocities by Political Regime

	1800-2020		1901-2020		1946-2020	
	Mass Atrocities	**Group-Selected**	**Mass Atrocities**	**Group-Selected**	**Mass Atrocities**	**Group-Selected**
Autocracy	166 (45.73%)	44 (57.89%)	149 (47%)	43 (62.32%)	91 (46.19%)	15 (60%)
Anocracy	128 (35.26%)	23 (30.26%)	114 (35.96%)	22 (31.88%)	65 (32.99%)	6 (24%)
Democracy	69 (19.01%)	9 (11.84%)	54 (17.03%)	4 (5.8%)	41 (20.81%)	4 (16%)
Total	363	76	317	69	197	25

Table 3 shows the distribution of mass atrocities by the three broad political regimes: autocracy, anocracy, and democracy. Autocracies were responsible for the bulk of both the general and the group-selective mass atrocities. For all three periods shown, the proportions of atrocities (of both kinds) decline as we move towards democracy.

The occurrences of mass atrocities classified by the major religion of the perpetrators over the period 1800-2020 are shown in Table 4. The largest number of mass atrocities was committed by countries that had a majority Christian population. This is followed by Islam, and then Communism. The remaining three religions (Buddhism, Hinduism, and Judaism) have had relatively few cases.

Table 4: Frequency of Mass Atrocity Occurrence by Religion, 1800-2020

Religion	No. of Obs.	Frequency
Buddhism	8	2.2%
Christianity	180	49.59%
"Communism"	67	18.46%
Hinduism	7	1.93%
Islam	78	21.49%
Judaism	3	0.83%
Other	20	5.51%

Total No. Obs. = 363

If we restrict attention to the five major religions and to democracies, the fatalities over 1800-2020 are shown in Table 5. The data show that democratic Christian populations have been associated with 17.1 million deaths in mass atrocities, and democratic Islamic populations are a distant second with less than half a million deaths.

Table 5: Fatalities Associated with Democracies, 1800-2020

(by Majority Religion)

Religion of Democracy	No. Obs.	Mean Fatality	Total Fatalities
Buddhism	5	26,359	131,796
Christianity	48	355,484	17,063,248
Hinduism	6	5,412	32,471
Islam	4	11,438	45,751
Judaism	3	1,945	5,835

Note that this Table only lists the mass atrocities by majority religion when the polity index at the time of the event corresponds to democracy. In other periods, like in periods of autocracy or in periods of transition between regimes, the atrocities committed are excluded in this table.

Since Christianity looms large in the above figures, Table 6 below shows the distribution over the three periods for Christianity. Even in the past 75 years, the post-WWII era, democracies with majority Christian populations have been associated with total mass atrocity deaths of 2 million around the world. In this context, it is interesting to look at the post Second War period, from 1946-2020.

Table 6: Fatalities Due to Christian Democracies by Period

Period	No. Obs.	Mean Fatality	Total Fatalities
1800-2020	48	355,484	17,063,248
1901-2020	33	197,991	6,533,726
1946-2020	20	101,226	2,024,526

The Second War is known to have been a period of many mass atrocities. The worst of these was the Holocaust, which has been extensively studied by sociologists and political scientists. It would be instructive to look into the post-WW II years to see if in this period the world has fared any better in terms of atrocities.

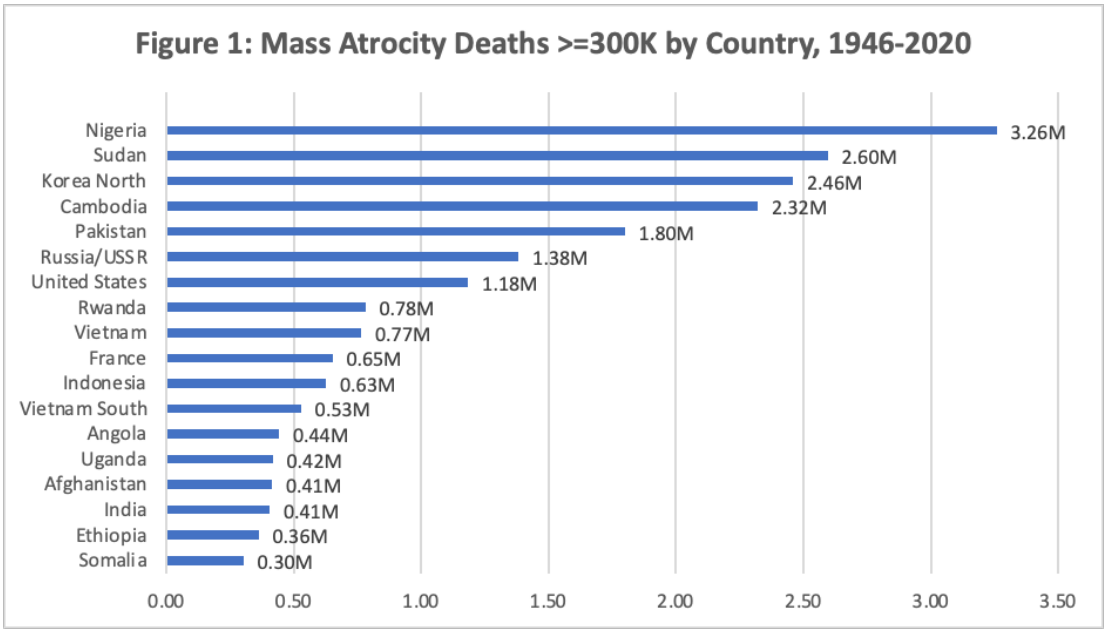


Figure 1 shows the number of deaths in mass atrocities (in millions) of countries which have been responsible for at least 300,000 deaths in mass atrocities after 1945. China, however, which ranks the highest with 64.6 million deaths, is not shown because it dwarfs the other numbers. There is considerable variation in the number of deaths, as we can see. The presence of China, North Korea, Cambodia, and Russia/USSR among the top 20 perpetrators strongly suggests that communist countries are very serious offenders in terms of mass atrocities. And the presence of seven African countries in this list should not lead us to think that mass atrocities are mainly a problem in communist and African countries. That the United States and France are also serious offenders should alert us to the fact that liberal democracies are also seriously implicated in mass atrocities of the post-WWII era, as we shall see in more detail later.

The summary statistics for the full sample are shown in Table 7. The second column is for when the religions are traditionally defined belief systems and the last column is for when communism has been interpreted as an irreligious belief system.

The average fatality per observation is around 44,300. About 53.2% of the mass atrocities were associated with territory. In the full sample, 21% of the observations were group-selective atrocities. That may seem like a lot (because such atrocities are known to be infrequent), but this is partly a result of how I have needed to code the data for analysis. If, in a single GSMA event (as in Cambodia), several ethnic and/or religious groups were killed or were killed in different countries, I code them separately because the differences in ethnicities and religions are important for the analysis and aggregation would erase them.

Around 21% of the mass atrocities occurred during the World Wars and another 32% during local wars. Around 13.5% of the atrocities occurred in colonies and another 12.9% in settler colonies (coded separately). The average ratio of the income of the perpetrators to that of the victims was 2.23. The polity index (which transformed the original 21 point scale going for -10 to +10 into a variable that goes from 0 to 1) is 0.41. Of the broad political regimes, autocracy claims 46% of the events, anocracy 35%, and democracy 19%.

Table 7: Summary Statistics, 1800-2020

	With Traditional Religions		With Communism as a "Religion	
Variable	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**
Log Fatalities	10.699	2.129	10.699	2.129
Population Density	3.102	1.365	3.102	1.365
Log Population	10.135	1.487	10.135	1.487
World War	0.207	0.405	0.207	0.405
Local War	0.322	0.468	0.322	0.468
Territorial	0.532	0.500	0.532	0.500
Colony	0.135	0.342	0.135	0.342
Settler Colony	0.129	0.336	0.129	0.336
Log of Perp.'s per cap. Income	8.162	1.042	8.162	1.042
Polity Index	0.405	0.318	0.405	0.318
Income Ratio	2.228	3.659	2.228	3.659
Autocracy	0.457	0.499	0.457	0.499
Anocracy	0.353	0.478	0.353	0.478
Democracy	0.190	0.393	0.190	0.393
Ethnic Diff.	0.176	0.382	0.176	0.382
Common Law	0.256	0.437	0.256	0.437
Civil Law	0.716	0.451	0.716	0.451
Muslim Law	0.052	0.223	0.052	0.223
Relig. Diff.	0.102	0.303	0.102	0.303
Communism	0.171	0.377	0.185	0.388
Buddhism	0.044	0.206	0.022	0.147
Christianity	0.592	0.492	0.496	0.501
Hinduism	0.019	0.138	0.019	0.138
Islam	0.218	0.413	0.215	0.411
Judaism	0.008	0.091	0.008	0.091
Other Non-Monotheistic	0.096	0.296	0.055	0.228
Christianity x Democracy	0.132	0.339	0.129	0.336
Duration of Conflict	11.069	19.679	11.069	19.679

Common law is associated with 26% of the countries responsible for mass atrocities, Civil law with 72%, and Muslim law with 5%.[26]

[26] The legal system figures add up to a bit more than 100% because some countries have a mixture of these three systems. This is because, in such cases, an observation has been assigned to each component legal system.

The difference between the statistics for traditional religions and those for when communism is treated as a religion really appears in the religion variables. When communism is considered a religion, some countries that were previously coded as Christian or Buddhist now get coded as Communist because the atrocities were perpetrated by communists. So the proportion of observations assigned to Christianity and Buddhism fall. Likewise, the proportion of observations that are coded as Christian democracies changes a bit.

Around 17.6% of the mass atrocities entailed only ethnic differences and 10.2 % entailed only religious difference Depending on whether religion is traditionally defined or untraditionally, Christianity is associated with 60% or 50%, of the events of mass atrocities, Communism with 17.1% or 18.5, Islam with 21.8%, and the remaining are associated with Buddhism, Hinduism, and other non-monotheistic religions. Christian democracies were associated with 13% of the atrocities.

In the next section, I move towards regression analysis to investigate a variety of hypotheses. The primary hypotheses to be tested are whether religious differences, ethnic differences, and political ideology are significantly correlated with deaths in mass atrocities. Furthermore, I also test whether monotheistic religions are associated with more mass atrocity deaths. Finally, I also test whether mass atrocity deaths is associated with whether colonies and settler colonies were the locations of the atrocities.

5. Empirical Strategy

The unit of analysis in my empirics is the country-incident and the primary dependent variable in my analysis is the (logarithm of) the number of deaths in the mass atrocity perpetrated. The question I investigate is: “Do differences in ethnicity, religion, and political ideology significantly correlate with the intensity of massacre (as measured by the number of deaths), conditional on a mass atrocity having occurred?” So, the periods that enter the analysis for any country are only those in which a mass atrocity has occurred (with deaths exceeding 1,000). This excludes periods in which no mass atrocity occured. In this, I deviate from the standard approach used in conflicts (e.g. Reynal-Querol (2002), Fearon and Laitin (2003)), wherein data from even years when no incident occurred is used, with the dependent variable coded as “0”. The standard

approach usually seeks to examine the correlates of the probability of an incident like civil war occurring. If I included all periods, I would be confounding the effects of ethnicity, religion, and political ideology in precipitating a conflict with their effects on the intensity of the massacre. Given my question's research focus here on the latter, my approach is more appropriate.[27]

The basic regression I estimate is the OLS:

$$(10)\quad y_{cit} = \alpha + \beta_{ED}EthnicDiff + \beta_{RD}ReligDiff + \beta_{ERD}Ethnic\&ReligDiff + \beta_{P}Polity + \beta_{EF}EthnicFrac + \beta_{EF2}(EthnicFrac)^2 + \beta_{Pop}LogPopulation + \beta_{Den}PopDensity + \beta_{Col}Colony + \beta_{SettCol}SettlerColony + \beta_{Inter}Interstate + \beta_{Perp-Inc}PerpIncome + \beta_{IncR}IncomeRatio + \beta_{Perp-Relig}PerpRelig + \beta_{E-Perp}PerpEthnicity + \beta_{trend}(t - 1800) + \delta_{WW} + \delta_{LW} + \delta_{Perp-Ethnicity} + \epsilon,$$

where y_{cit} is the logarithm of the mass atrocity deaths per 100,000 of the perpetrator population in incident *i* of country *c* in period *t* (taken to be the mid-point of the period of conflict). I refer to this normalized measure variously as the mass death or casualty or fatality rate. The first three variables on the right hand side are dummies for differences ethnicity only, religion only, and both ethnicity & religion; *Polity* is the polity index, *EthnicFrac* is the ethnic fractionalization in the country, *LogPopulation* is the logarithm of the perpetrator population, *PopDensity* is the population density of the country[28], *Colony* is a dummy variable for a colony, and likewise for *SettlerColony*. Interstate is a dummy variable for an atrocity is across countries (the default being a domestic atrocity), *PerpIncome* is perpetrator country's per capita income, *IncomeRatio* is the ratio of the per capita incomes of the perpetrators to that of the victims to capture technological differences, and *PerpRelig* is the majority religion of the perpetrators in country *c* in incident *i* in period *t*.[29] The term $\delta_{Perp-Ethnicity}$ denotes dummies for the ethnicities of the perpetrators.

[27] Another reason for this is the following. Suppose there is a 50-year gap before two atrocities in a country. Now the majority religion typically does not change during the period, nor does the ethnic composition. Only the polity index varies. All the control variables are also pretty much constant. So the "0" for the dependent variable for these 50 years will wash out all the effect of ethnicity and religion (and also polity to some extent) on mass atrocities because only one year will show atrocities. How do we then explain the atrocity at the end of 50 years then? I would say that, behind the scenes, there are rising grievances/hostilities *that we cannot observe and so have no data on* but suddenly these grievances/hostilities reach a boiling point in the 51st year and an atrocity takes place. So it is better to include only the years when there are atrocities.

[28] In case the atrocity occurs in a colony, it is the population and density of the home country.

[29] As mentioned, for intrastate atrocities this ratio is 1 because I assign the same per capita income to both perpetrators and victims. This is not to deny that there can be income differences between the two groups; it is because I am limited by the data.

There are many ethnic groups in the data and in order to maintain the degrees of freedom in the estimation, I included these dummies only when the sample size in the exercise is large enough. Finally, β_{trend} is the time-trend parameter, δ_{WW} and δ_{LW} are dummies if the event occurred during a world war or a local war, and ϵ is the error term.

Regressions reported in this paper have standard errors clustered at the country level because some countries have been involved with many atrocities and it is natural to posit the errors are correlated. I follow this asterisks convention for significance: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$.

Occasionally, like in subsection 6.1 below, the left hand side variable is a dummy variable (e.g. whether or not the atrocity was a GSMA). In that case, the empirical model is obviously to be interpreted as a linear probability model.

6. Results

6.1 Group-Selective Mass Atrocities

I explore first a specific form of mass atrocity that I labeled 'group-selective'. The notion of group-selective mass atrocities, as mentioned, is an attempt to capture something that approaches genocide but is lacking the actual proof of intention that is crucial for establishing this. Therefore, the definition of Group-Selective Mass Atrocity that I invoke deviates from the strict definition of genocide in the UN Genocide Convention. By this definition, which includes genocides, there are 76 group-selective mass atrocities in my data, of which 54 are intrastate (domestic). In the regression presented in Table 8, the precise question that is being addressed is: Conditional on a group-selective mass atrocity having occurred, what are the correlates of mass casualty rate?

Table 8 shows the estimates of the OLS in (10) using the full sample of GSMAs, 1800-2020. Our main variables of interest are the ethnicity, political ideology, and religion variables, and these are sequentially added in the table. We see that the polity index consistently of the same sign and that their values are reasonably stable. If both ethnicity and religion differ, they impinge adversely on mass casualty rate in the GSMA. Population and population density of the

perpetrator countries are positively correlated with mass deaths in atrocities. In the full specification, settler colonies are negatively correlated with GSMA deaths at the 10% level of significance. All other variables are insignificant.

Table 8: Log Mass Deaths for Group-Selective Mass Atrocities, 1800-2020

Dependent variable: Log Mass Fatality Rate					
	(1)	(2)	(3)	(4)	(5)
Polity Index	--	-2.167**	-1.745	-2.005*	-1.368
		(1.028)	(1.076)	(1.008)	(1.061)
Ethnic Diff.	--	--	1.028	1.422	0.872
			(0.763)	(0.873)	(0.728)
Relig. Diff.	--	--	--	1.691**	0.750
				(0.645)	(0.788)
Ethnic & Relig. Diff.	--	--	--	--	1.337**
					(0.585)
Ethnic Frac.	0.542	1.839	1.609	0.003	1.816
	(5.338)	(5.723)	(5.445)	(5.369)	(5.322)
(Ethnic Frac.)^2	-1.629	-2.121	-1.646	0.281	-1.934
	(5.599)	(5.906)	(5.563)	(5.384)	(5.339)
Population Density	0.551**	0.364*	0.446**	0.444**	0.387*
	(0.243)	(0.211)	(0.193)	(0.197)	(0.200)
Log Population	0.541**	0.485**	0.499**	0.483**	0.551**
	(0.262)	(0.218)	(0.216)	(0.211)	(0.217)
World War	1.180	0.502	0.856	0.812	1.337
	(1.040)	(0.908)	(0.887)	(0.894)	(0.874)
Local War	1.520*	1.186	1.118	1.642**	1.511*
	(0.808)	(0.847)	(0.779)	(0.729)	(0.751)
Colony	1.024	0.276	0.308	-0.170	-0.247
	(1.216)	(0.964)	(0.921)	(0.733)	(0.727)
Settler Colony	-1.838	-1.521	-1.488	-2.356*	-2.514*
	(1.674)	(1.535)	(1.488)	(1.261)	(1.341)
Interstate	0.709	0.644	0.593	-0.095	0.030
	(0.945)	(0.862)	(0.836)	(0.992)	(0.937)
Income Ratio	-0.128	-0.023	-0.323	-0.223	-0.561
	(0.317)	(0.335)	(0.434)	(0.429)	(0.461)
Time Trend	0.009	0.003	0.004	-0.011	-0.015
	(0.013)	(0.010)	(0.010)	(0.012)	(0.013)
Duration of Conflict	0.004	0.007	0.015	0.012	0.029
	(0.017)	(0.016)	(0.019)	(0.016)	(0.018)
No. of Obs.	76	76	76	76	76
R-Squared	0.275	0.330	0.351	0.390	0.419

Table 9: Group-Selective Mass Atrocities by Period, with and without the Holocaust

Dependent Variable: Group-Selective Mass Atrocity (0/1)					
	1800-2020	**1800-2020 Without Holocaust**	**1901-2020**	**1901-2020 Without Holocaust**	**1946-2020**
Polity Index	-0.148**	-0.139**	-0.256***	-0.244***	-0.083
	(0.061)	(0.060)	(0.062)	(0.056)	(0.059)
Ethnic Diff.	0.103	0.106	0.105	0.103	0.055
	(0.072)	(0.071)	(0.074)	(0.073)	(0.055)
Relig. Diff.	0.204***	0.193***	0.238***	0.221***	0.180**
	(0.070)	(0.069)	(0.071)	(0.069)	(0.074)
Ethnic & Relig. Diff.	0.262***	0.220***	0.282***	0.235***	0.103
	(0.071)	(0.072)	(0.072)	(0.073)	(0.113)
Ethnic Fract.	0.623	0.690*	0.619	0.723*	0.592*
	(0.388)	(0.358)	(0.407)	(0.367)	(0.352)
(Ethnic Fract.)^2	-0.717*	-0.788**	-0.719*	-0.824**	-0.739**
	(0.384)	(0.349)	(0.387)	(0.341)	(0.280)
Population Density	-0.007	-0.006	-0.028	-0.027	-0.016
	(0.018)	(0.018)	(0.021)	(0.021)	(0.022)
Log Population	-0.025	-0.026	-0.017	-0.020	-0.028
	(0.019)	(0.019)	(0.018)	(0.017)	(0.019)
World War	0.282***	0.209***	0.256***	0.190**	--
	(0.089)	(0.091)	(0.076)	(0.082)	
Local War	0.085	0.083	0.130*	0.127	0.167**
	(0.072)	(0.072)	(0.078)	(0.077)	(0.080)
Colony	-0.049	-0.055	-0.039	-0.040	-0.144
	(0.090)	(0.086)	(0.095)	(0.091)	(0.114)
Settler Colony	0.036	0.030	-0.056	-0.063	-0.070
	(0.076)	(0.075)	(0.053)	(0.052)	(0.054)
Interstate	-0.148**	-0.109*	-0.172**	-0.126*	0.012
	(0.066)	(0.064)	(0.068)	(0.064)	(0.080)
Income Ratio	0.010**	0.009**	-0.007	-0.007*	-0.010**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Time Trend	-0.001	-0.001	-0.001	-0.001	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Duration of Conflict	-0.001	-0.001	-0.001	-0.001	-0.000
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
No. of Obs.	363	345	317	299	197
R-Squared	0.246	0.159	0.293	0.203	0.176

Table 9 shows the estimates of a linear probability regression pertaining to GSMAs, where the left hand side in (10) is replaced by the dummy variable indicating whether the episode of mass atrocity was a group selective one. The question Table 9 answers is: Given that a mass atrocity has occurred, what are the correlates associated with it being a group-selective one? Regression results are shown for the three periods 1800-2020, 1901-2020, and 1946-2020. Since there are a substantial number of GSMA observations from the Holocaust, estimates of the former two are also shown when the observations from the Holocaust are dropped. The discussion below pertains to the correlations estimated in Table 9.

The negative sign of the polity index in Table 9 suggests that group-selective mass atrocities are less likely with political systems that are more democratic. This seems to provide evidence for the claim that democracies reduce genocide-like atrocities, but we shall encounter a more nuanced story later in this paper. Ethnic differences are not associated with GSMAs. Religious differences are significantly correlated positively with the mass atrocity being group-selective. Though ethnicity by itself is not significant, observations where both ethnicity and religion differ are more likely to be group-selective.

The results provide evidence for the claim that ethnic fractionalization increases the chance of group-selective mass atrocities, especially in the data since the 20th century onwards.[30] Furthermore, as expected, there is a quadratic correlation of ethnic fractionalization with incidence of group-selective mass atrocities.[31] It is consistent with the finding of Easterly et al (2006), who found that mass killings are quadratic in ethnic fractionalization. Homogeneous populations tend not to have mass atrocities but intermediate levels of ethnic fractionalization promote such targeted mass atrocities because ethnic differences seem to be an important source of conflict. However, it may be argued, that too much fractionalization is not conducive to conducting such atrocities because of small group sizes are less effective in perpetrating them. Ordinary citizens are often coerced into participating in mass atrocities, as in Rwanda (Rogall

[30] Spolaore and Wacziarg (2016) examined the incidence of interstate wars and they found the ethnic differences reduce the probability of interstate wars. The result in Table 9, however, is on group-selective mass atrocities, not on the incidence of wars.

[31] Polarization has been shown by Montalvo and Reynal-Querol (2005) to be a better measure of the salience on ethnicity in conflicts than fractionalization. Since I do not have polarization data going back two hundred years, it is important for me to use the linear and quadratic terms in fractionalization to simulate polarization. This also conforms to the view of Horowitz (1985) that the effect of fractionalization on probability of conflict is non-monotonic.

(2021)). When group sizes are small, the disciplining mechanism needed to coerce participation may be too weak to succeed. Although I am not investigating the incidence of civil wars, this is somewhat analogous to the findings in the literature that ethnic fractionalization does not affect the probability of civil wars [Collier and Hoeffler (2002), Fearon and Laitin (2003)].

Group-selective mass atrocities were indeed highly correlated with the World Wars and also with local interstate wars. Arguably, this is because wars provided occasions for engaging in mass atrocities under various pretexts that exploited the opportunity with lower accountability. However, wars are neither necessary nor sufficient for genocides to occur (Bartrop (2002)).[32] Colonies and settler colonies were not significant locations of group-selective mass atrocities.

The coefficient of the variable 'Interstate' is negative, indicating that GSMAs are more likely in intrastate mass atrocities (the bulk of the GSMAs are intrastate). Proximity seems to be an important correlated of GSMAs. More specifically, it is the sharing of a country or resources by different ethnic groups that may be seen as a problem "solved" by mass atrocities, in accordance with Esteban, Morelli, and Rohner (2015). This result that GSMAs are more common in intra-country conflict than in intercountry ones is a feature found in Anderton's (2016) data, too. Spolaore and Wacziarg (2016) unearthed a robust, counter-intuitive finding that interstate wars are more likely between countries that have the same or similar ethnicities (as measured by genetic distance)**.** But I find that within the same country, different ethnicities promote GSMAs. It appears that it is the co-residence of "unwanted" ethnic groups in the same country may be a key feature of GSMAs.[33]

The coefficient of income ratio suggests that GSMAs are less likely than general mass atrocities between groups with large technology differences. This ratio suggests that technology differences are not relevant for the probability of GSMAs (though, as we shall see later in the paper, it is nonetheless relevant for the number of casualties in interstate atrocities, once they are initiated).

[32] Bartrop (2002) points out that, for example, the deaths of civilians accounted for only 5% of all deaths in World War I but escalated after that: in World War II, it was 66% and by the 1980s this number rose to 80%.

[33] When one group tries to rid the country of some groups it deems undesirable, it first attempts to do so by deporting them; ethnic cleansing is often the first option. These ethnic groups are not deemed undesirable if they live elsewhere. Stalin deported many ethnic groups (Poles, Ukranians, Chechyans, Koreans, among others) and also political classes (like the landowning *kulaks*) to remote areas like Siberia and Central Asia. The Nazis sought to deport all the Jews from Germany to elsewhere in Eastern Europe and even to the African country of Madagascar before they settled on genocide.

I mention in passing that the data shows the occurrence of famines (not included in regression) is also highly correlated GSMAs. Strictly speaking, the incidence of famines is an endogenous variable in this context because group-selective mass atrocities are often committed by deliberately contriving famines. So, famines have not been included as an explanatory variable.

6.2 Mass Atrocities and the Five Major Religions

In this subsection, I restrict the analysis to mass atrocities that were perpetrated by countries where the majority populations belonged to one of the five major traditional religions: Christianity, Islam, Judaism, Hinduism, and Buddhism. This will enable us to test whether the evidence points to religion as being complicit in mass atrocities. It will also permit us to test whether, relative to polytheistic religions, monotheism tends to be associated with magnified religious proclivity for mass atrocities. We can also put to the test the claim that Islam is particularly open to committing mass atrocities, as is commonly believed without the benefit of statistical evidence.

The correlates of deaths inflicted in mass atrocities are shown in Table 10. The more democratic a country is the lower is the casualty rate in mass atrocities for the whole sample period 1800-2020 but not in the subsample periods. Ethnic differences do not matter but religious differences are very significantly associated with elevated mass death rates. The population size of perpetrators is significantly correlated with casualties, as are World Wars and local wars. Mass atrocities in settler colonies have higher casualty rates, but not those in mere colonies.

Mass atrocities have fewer casualties if perpetrated by rich countries but when they engage in them they tend to be on poorer countries (since the coefficient of income ratio is significantly positive). The positive coefficient of income ratio on deaths in mass atrocities is consistent with my model that technological/capacity advantage increases the probability of victory and mass atrocity deaths. This finding is also consistent with the evidence of Valentino et al (2006) with regard to the killing of civilians in war.

Table 10: Mass Atrocity Deaths Associated with the 5 Major Religions

Dependent Variable: Mass Fatality Rate					
	1800-2020	**1800-2020 Without Holocaust**	**1901-2020**	**1901-2020 Without Holocaust**	**1946-2020**
Polity Index	-0.967*	-0.948*	-0.666	-0.603	-0.791
	(0.518)	(0.546)	(0.516)	(0.561)	(0.694)
Ethnic Diff.	0.286	0.320	0.436	0.505	0.305
	(0.283)	(0.290)	(0.325)	(0.339)	(0.414)
Relig. Diff.	1.008***	1.031***	1.019**	1.034**	1.375***
	(0.383)	(0.382)	(0.427)	(0.428)	(0.482)
World War	1.400***	1.311***	1.430***	1.240***	--
	(0.334)	(0.406)	(0.349)	(0.414)	
Local War	0.439	0.412	0.646**	0.627**	0.897***
	(0.265)	(0.265)	(0.266)	(0.269)	(0.302)
Population Density	-0.167	-0.203	-0.045	-0.074	-0.235
	(0.140)	(0.132)	(0.140)	(0.133)	(0.141)
Log Population	0.445***	0.410***	0.549***	0.552***	0.382**
	(0.105)	(0.114)	(0.112)	(0.131)	(0.152)
Colony	0.429	0.371	-0.032	-0.058	-0.202
	(0.397)	(0.390)	(0.509)	(0.514)	(0.700)
Settler Colony	0.416	0.393	0.778***	0.789***	0.986***
	(0.380)	(0.395)	(0.276)	(0.283)	(0.352)
Log of Perp.'s per cap. Income	-0.500**	-0.464**	-0.537***	-0.513**	-0.251
	(0.205)	(0.217)	(0.197)	(0.211)	(0.216)
Income Ratio	0.100***	0.100***	0.087***	0.086***	0.077***
	(0.022)	(0.022)	(0.023)	(0.023)	(0.022)
Communism	0.773	0.789	0.665	0.690	-0.095
	(0.502)	(0.513)	(0.495)	(0.501)	(0.605)
Buddhism	1.178**	1.123**	1.142**	1.152**	0.647
	(0.536)	(0.539)	(0.543)	(0.558)	(0.573)
Christianity	-0.406	-0.410	-0.128	-0.110	-0.237
	(0.449)	(0.451)	(0.458)	(0.459)	(0.626)
Hinduism	-2.211***	-2.173***	-2.205***	-2.238***	-2.029***
	(0.439)	(0.456)	(0.474)	(0.491)	(0.489)
Islam	--	--	--	--	--
Judaism	-2.088**	-2.222**	-2.179**	-2.294***	-3.372***
	(0.936)	(0.917)	(0.855)	(0.833)	(1.007)
Time Trend	-0.011**	-0.012**	-0.018**	-0.020***	-0.021**
	(0.005)	(0.005)	(0.007)	(0.007)	(0.009)
Duration of Conflict	0.003	0.003	0.032***	0.032***	0.024*
	(0.005)	(0.005)	(0.010)	(0.010)	(0.013)
No. of Obs.	328	310	285	267	176
R-Squared	0.384	0.392	0.412	0.420	0.436
Perp.'s Ethnicities Dummies	Yes	Yes	Yes	Yes	Yes

Among the religions, only Buddhism shows higher casualties (relative to Islam, the left-out category) in the pre-WWII periods. Hinduism and Judaism are consistently associated with significantly lower casualty rates than the other three religions. Note that, in terms of mass atrocity deaths inflicted, Christianity is not significantly different from Islam. Furthermore, there is no justification for the presumption (especially prevalent in the West) that Islam is more violent than Christianity. The other monotheistic religion of Judaism, however, has significantly lower casualties.

Some robustness checks ensure that outliers are not driving the results. Table 10.A in the Appendix, which shows that the results when the highest 5% of the observations in number of atrocities dropped, are not very different.

6.3 The Post World War II Period

The period that may seem most relevant to us is the post war era of 1946-2020. This was a period after which many countries got decolonized and the rise of the Cold War led to many mass atrocities. Even after the Cold War ended in 1989 there have been 95 mass atrocities, 26 of which were interstate.

The correlates of (the log of) fatality rate are shown in Table 11. Many of the results in column 2 are similar to those shown in the previous Table, so I will only comment on a few.

In Table 11, the coefficient of the polity index, which indicates the extent of democracy, does not attenuate mass atrocity deaths. This may not be as surprising if we note that, in the post WWII era, western countries (which are typically ranked as near-ideal democracies) embarked on wars in Korea, Vietnam, Cambodia, Indonesia, Dominican Republic, Chile, and elsewhere to prevent the spread of communism by spreading democracy.[34] The ensuing atrocities that arise from such interventions are typically unacknowledged in quantitative studies that strictly examine genocides but they nevertheless have resulted in massive numbers of casualties. These are captured in my data, to some extent.

[34] See, for example, Herring (1991), Shiraz (2011), and Brands (1988).

Table 11: Log Fatalities for Post WWII Period

Dependent Variable: Log of Fatality Rate		
	With Traditional Religions	**With Communism as a "Religion"**
Polity Index	-1.075 (0.850)	-1.014 (0.790)
Ethnic Diff.	0.279 (0.436)	0.261 (0.425)
Relig. Diff.	1.434*** (0. 479)	1.479*** (0. 446)
Local War	0.912*** (0.307)	0.987*** (0.297)
Population Density	-0.244 (0.147)	-0.246* (0.146)
Log Population	0.370** (0.143)	0.307** (0.132)
Colony	-0.386 (0.645)	-0.487 (0.624)
Settler Colony	1.017** (0.385)	1.061*** (0.370)
Log of Perp.'s per cap. Income	-0.217 (0.226)	-0.233 (0.226)
Income Ratio	0.068** (0.026)	0.069*** (0.026)
Common Law	--	--
Civil Law	0.286 (0.515)	0.297 (0.523)
Muslim Law	0.798 (0.692)	0.792 (0.689)
Communism	-0.163 (0.608)	-0.033 (0.623)
Buddhism	0.649 (0.575)	0.411 (0.612)
Christianity	-0.213 (0.627)	-0.084 (0.576)
Hinduism	-1.977*** (0.485)	-2.104*** (0.547)
Islam	--	--
Judaism	-3.063*** (1.101)	-3.224*** (0.994)
Christianity x Democracy	0.798 (0.662)	1.046 (0.719)
Time Trend	-0.022** (0.009)	-0.023** (0.009)
Duration of Conflict	0.024* (0.012)	0.023** (0.011)
No. of Obs.	176	176
R-Squared	0.445	0.455
Perp.'s Ethnicities Dummies	Yes	Yes

Downes (2007) finds that democracies are not less likely than other political regimes to kill civilians in wars. He takes issue with the "democratic peace" theory of authors such as Rummel (1995), who argue that democracy tends to reduce the killing of civilians in war. Downes, in fact, finds that, in wars, democracies kill more civilians than autocracies. He only focuses on civilian casualties in war, however, unlike my broader definition of casualties here.

Mann (2004) has taken issue with the claim that democracies are less prone to genocides. Through several in-depth case studies, he has shown that this is not so. In what he calls "the dark side of democracy," he argues that democratic ideals can get perverted sometimes because "we the people" may not be inclusive in its definition and some left-out ethnic groups may become victims of genocide. Although he points to the neglect by the democratic peace theorists of settler colonies like the U.S., Mann's analysis is largely restricted to intra-country genocides. However, roughly 70% of the observations of mass atrocities in the post-WWII period were perpetrated by liberal democracies and were international, not intrastate.

The above result is also consistent with the work of Martin, Mayer, and Thoenig (2008), who found that multilateral trade tends to increase military conflicts, in contrast to bilateral trade which does the opposite. Democracy tends to causally increase trade (see Milner and Mukherjee (2009) for a review). The increase in trade promoted by democracy, much of it multilateral especially after WTO came into existence, and the associated increase in military conflicts would be expected to result in more mass atrocities. The evidence, therefore, suggests that we would be mistaken in presuming that democracies are less prone to mass atrocities.

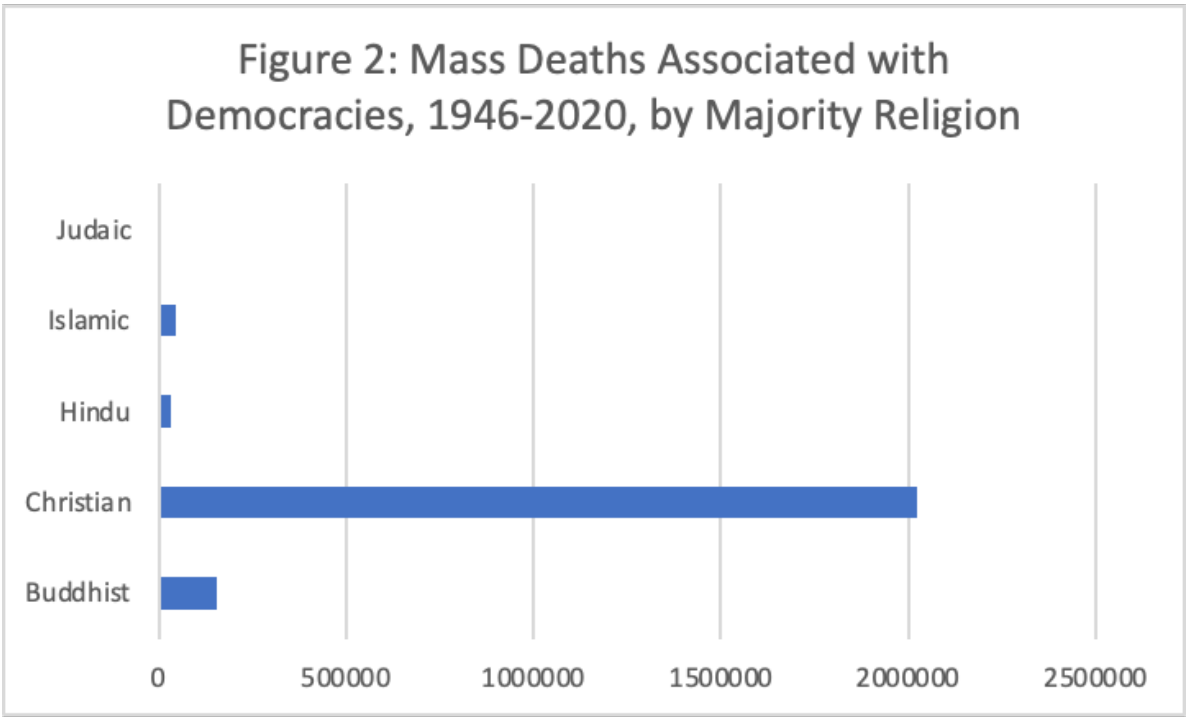
Ethnic differences do not matter but religious differences are associated significantly with mass atrocity deaths.

Settler colonialism is positively correlated significantly with casualties in mass atrocities in the post-WWII period. As long as settler colonies had been colonies for some time, it is in the interest of the settlers to minimize violence. Also, good institutions would have reduced the occasions for mass atrocities. However, the post-WWII era was one of decolonization—most of the European countries lost their former colonies. This led to a rise in mass atrocities because of the reluctance of the former colonial masters to relinquish their colonies. Examples of these are

numerous: France in Algeria and Indochina, the U.K. in Kenya, Holland in Indonesia, Portugal in Angola and Mozambique, among many others.

Mass atrocities initiated by civil law and Muslim law countries are not significantly more damaging, relative to countries with common law (the left-out category).

Perpetrators of mass atrocities that were democracies and which had majority Christian populations inflicted significantly higher casualty rates than other democracies. Essentially, liberal democracies have been quite involved in mass atrocities in the post-war period. Over the period 1800-2018, liberal democracies were responsible for the deaths of over 17.6 million deaths in mass atrocities (49 cases), of which around 2.2 million occurred in the post WWII period (23 cases). See Figure 2 for the post-WW II period.[35] For this reason, the interaction term Christianity × Democracy as an explanatory factor in the regressions of Table 11 but is insignificant, a finding that is reversed in the more nuanced treatment of religion that follows.



[35] The communist deaths in Figure 2 refer to mass atrocities due to insurgencies by communist groups within democratic countries.

Table 12: Log Fatalities with Traditional Religions, 1901-2020

Dependent Variable: Log of Fatality Rate				
	(1)	(2)	(3)	(4)
Polity Index	--	-1.071* (0.635)	-1.042* (0.625)	-1.050* (0.619)
Ethnic Diff.	--	--	0.350 (0.316)	0.401 (0.327)
Relig. Diff.	--	--	--	1.044** (0.420)
World War	1.433*** (0.376)	1.427*** (0.363)	1.418*** (0.353)	1.405*** (0.348)
Local War	0.711** (0.273)	0.742*** (0.270)	0.704*** (0.266)	0.661** (0.270)
Population Density	-0.090 (0.139)	-0.080 (0.141)	-0.051 (0.143)	-0.063 (0.141)
Log Population	0.523*** (0.104)	0.553*** (0.110)	0.555*** (0.110)	0.537*** (0.109)
Colony	-0.126 (0.513)	-0.007 (0.490)	0.007 (0.501)	-0.072 (0.507)
Settler Colony	0.779*** (0.287)	0.818*** (0.297)	0.813*** (0.297)	0.839*** (0.296)
Log of Perp.'s per cap. Income	-0.563*** (0.206)	-0.524** (0.212)	-0.547** (0.212)	-0.519** (0.209)
Income Ratio	0.074*** (0.023)	0.071*** (0.023)	0.073*** (0.024)	0.076*** (0.024)
Common Law	--	--	--	--
Civil Law	0.117 (0.438)	0.083 (0.429)	0.072 (0.424)	0.125 (0.417)
Muslim Law	0.598 (0.703)	0.556 (0.705)	0.562 (0.704)	0.642 (0.684)
Communism	0.772 (0.478)	0.782 (0.472)	0.743 (0.484)	0.702 (0.508)
Buddhism	0.534 (0.505)	0.716 (0.519)	0.772 (0.535)	1.164** (0.553)
Christianity	-0.095 (0.488)	-0.149 (0.479)	-0.160 (0.472)	-0.139 (0.448)
Hinduism	-1.964*** (0.499)	-1.761*** (0.496)	-1.718*** (0.497)	-2.119*** (0.471)
Islam	--	--	--	--
Judaism	-1.630*** (0.584)	-0.816 (0.803)	-0.722 (0.830)	-1.799* (0.918)
Christianity x Democracy	0.257 (0.461)	0.793 (0.507)	0.702 (0.514)	0.761 (0.502)
Time Trend	-0.021*** (0.006)	-0.019*** (0.006)	-0.019*** (0.007)	-0.019*** (0.007)
Duration of Conflict	0.032*** (0.010)	0.029*** (0.011)	0.032*** (0.011)	0.031*** (0.010)
No. of Obs.	285	285	285	285
R-Squared	0.390	0.398	0.402	0.418
Perp.'s Ethnicities Dummies	Yes	Yes	Yes	Yes

It may be noted that, in the post-WWII era, Hinduism and Judaism remain the only two religions that are negatively correlated with mass atrocity casualties (relative to Islam).

Finally, the estimates show that the time trend of mass deaths in atrocities is negative and that the death rate is increasing in the duration of conflict.

6.4 Mass Atrocities Associated with All Religions

I now consider the sample from 1901 onwards and include all the religions in the traditional sense, and this includes the category of religions called 'Other'. Table 12 presents the regression results for the correlates of the log of fatalities when the controls are progressively added. We see the estimated coefficients are stable.

Table 13 shows the full specification for the traditional religions as well as for the case when communism is treated as a religion. Table 13.A in the Appendix presents robustness checks (without top 2% of observations) to ensure outliers are not driving the results (but the coefficient of *Christianity* $\times$ *Democracy* becomes positive when Communism is treated as a religion). I will restrict attention to Table 13 in my remarks.

To avoid repetition, I draw attention to only three important points here. First, the coefficient of the perpetrator's population density is insignificantly correlated with mass atrocity deaths. So the stress of land scarcity is not a cause of mass atrocities in general. Second, from the last column of Table 13, we see that there is no statistical difference between Christianity, Islam, and Buddhism in terms of correlations with mass atrocities. Hume (1757), Stark (2002), and Schwartz (1998) have argued that monotheism is prone to violence relative to polytheism. These results seem to lend some credibility to the hypothesis as far as Christianity and Islam go—at least relative to the polytheistic religion of Hinduism. For the monotheistic religion of Judaism there have not been many instances of mass atrocities in the past two centuries, and so Judaism, also monotheistic, cannot be clubbed with the others in terms of mass atrocity deaths. As for the reason why Judaism might differ, I shall offer my speculation in the concluding section of this paper.

Table 13: Log Fatalities, 1901-2020

Dependent Variable: Log of Fatality Rate		
	With Traditional Religions	**With Communism as a "Religion"**
Polity Index	-1.050* (0.619)	-1.101* (0.601)
Ethnic Diff.	0.401 (0.327)	0.416 (0.325)
Relig. Diff.	1.044** (0.420)	1.013** (0.412)
World War	1.405*** (0.348)	1.405*** (0.346)
Local War	0.661** (0.270)	0.758*** (0.261)
Population Density	-0.063 (0.141)	-0.064 (0.141)
Log Population	0.537*** (0.109)	0.480*** (0.105)
Colony	-0.072 (0.507)	-0.124 (0.512)
Settler Colony	0.839*** (0.296)	0.841*** (0.302)
Log of Perp.'s per cap. Income	-0.519** (0.209)	-0.530** (0.213)
Income Ratio	0.076*** (0.024)	0.076*** (0.024)
Common Law	--	--
Civil Law	0.125 (0.417)	0.162 (0.422)
Muslim Law	0.642 (0.684)	0.610 (0.682)
Communism	0.702 (0.508)	0.529 (0.609)
Buddhism	1.164** (0.553)	0.963 (0.694)
Christianity	-0.139 (0.448)	-0.251 (0.514)
Hinduism	-2.119*** (0.471)	-1.900*** (0.617)
Islam	--	--
Judaism	-1.799* (0.918)	-1.761** (0.877)
Christianity x Democracy	0.761 (0.502)	1.016** (0.501)
Time Trend	-0.019*** (0.007)	-0.019*** (0.007)

Duration of Conflict	0.031*** (0.010)	0.030*** (0.011)
No. of Obs.	285	285
R-Squared	0.418	0.420
Perp.'s Ethnicities Dummies	Yes	Yes

Third, the popular presumption that Islam is the most aggressive religion is not substantiated by the facts here. Huntington (1993) has claimed that the greatest danger to the West is a clash of civilizations, and that religion will be an important component of this. In this, my data suggest that he was right. He also pointed especially to Islamic civilization as the major rival. The numbers here say that there is no difference between Christianity and Islam in terms of mass atrocity deaths. Countries with majority Christian populations are associated with significantly higher casualties for the entire period of the 20th century on than those with majority Islamic. Indeed, if we look at the second column of Table 13, we see that the net effect on mass killings of Christianity, after allowing for the interaction with democracy, is far greater than that of Islam. All else constant, it is $exp\ (1.016)$, that is, 2.76 times higher. This suggests that, as far as mass atrocities go, it is the liberal Christian democracies of the West that should be of greater concern than Islam.

Table 13 provides an answer to another interesting and important question: Is religious difference more damaging in mass atrocities than ethnic differences or vice versa? As Stewart (2011) points out, the evidence to date on this question is ambiguous. My estimates in Column 2 of Table 13 say that religious differences are deadlier than ethnic differences. Mass deaths do not increase significantly for ethnic differences compared to when there are no ethnic differences, all else constant. However, when there are religious differences compared to when there are no religious differences, mass deaths increase by a factor of 2.75 $(= exp\ (1.013))$. Religious differences, therefore, seem to inflict nearly thrice the casualties compared to when the religions are the same. This may be expected because religious killing can come with what is arguably divine sanction in a world where typically it is only the state that has a monopoly on killing.[36] Another reason is that, when some values are deemed to be 'sacred', there is much less scope for bargaining (Ginges et al (2007), Eswaran and Neary (2018)). This finding on the relative

[36] As Juergensmeyer (1993, Ch.6) views this deadliness of religion: "These acts [of mass killing], although terribly real, are then sanitized by becoming symbols; they are stripped of their horror by being invested with religious meaning."

importance of religion and ethnicity is consistent with Reynal-Querol's (2002) finding on incidence of civil wars during the period 1960-1995, and extends it to mass atrocities and for data over a longer period. Her argument, which is compelling, is that religion is more inflexible than ethnic boundaries and is also more exclusive—people can be of mixed-ethnicity but they belong exclusively to one religion.

In liberal democracies, we believe that the separation of church and state guarantees that religion stays in the private sphere. If the above correlations are suggestive of causation, we may have reason to suspect that this separation may do little to prevent religion from tacitly influencing foreign policy without any overt intervention of the church. As Campbell (2018) has argued, in the U.S. especially, the influence of religion on politics is quite overt and the causation goes both ways. Table 13 shows that the interaction between Christianity and democracy is significant at the 5% level. Theocracies may have been responsible for far fewer mass atrocities and fewer deaths than liberal Christian democracies. For example, since 1979 when Iran became a theocracy, Iran inflicted deaths of 22,249 in mass atrocities while the United States inflicted nearly double the amount, 42,000 deaths, and the U.K. 28,921 deaths.

Finally, I note that countries with civil law and Muslim law are not associated with significantly higher casualties in mass atrocities than common law (the left out category).

7. Discussion and Conclusion

Scarcity of land, or high population density, may be viewed as a natural reason for desiring more territory, and mass atrocities may be seen an accompaniment of warring for territory. In fact, the idea of *Lebensraum* (the need for "living space") that prevailed in Germany in the first half of the 20th Century was ostensibly the reason for the invasions that led to the Second War on the Atlantic side (Kamenetsky (1961)).[37] Scholars suggest that there is a link between Lebensraum and the Holocaust (see e.g. Mineau (1999, esp. Ch. 3)), though the relationship is not direct or

[37] Population pressures have also been suggested as explanations for the Japanese invasions in Asia, leading to the Second War on the Pacific side (Lu (2020)).

causal.[38] In my data, high population density has explanatory power not for all mass atrocities but only for group-selective mass atrocities. This empirical finding on the positive correlation between population density and deaths in group-selective mass atrocities (which includes genocides) lends some quantitative credibility to the view that the ideology of *Lebensraum* went hand-in-hand with the desire to remove or eliminate groups deemed undesirable from what was to be Germany after its territorial conquest. Many of the important determinants of mass atrocity deaths, however, seem to lie outside economics; religious differences and ideological antagonisms have strong correlations. In these, there is the common thread of identity: what is most salient in mass atrocities is the predominant sense of identity that individuals adhere to in the circumstance. In the case of the Holocaust, it was identity with an alleged superior race.

With the clear exception of Judaism, the results of this paper lend partial support to the claim of Hume (1757/2010) that monotheistic religions are more intolerant than polytheistic ones. It is also consistent with Richardson's conclusion based on his data on the incidence of wars between 1809 and 1949 and with Iyigun's (2015) analysis of the interactions between European countries and the Ottoman empire.[39] The exception of Judaism, however, calls for a more nuanced interpretation of all these findings, including mine.[40] Perhaps it is the universality of a monotheistic religion (that is, it is open to all) is a necessary condition for the religion to be implicated in mass atrocities. Christianity and Islam are universal monotheistic religions but Judaism is not deemed to be, though it is monotheistic. Perhaps adherence to the belief in the "One True God" is not in itself a sufficient condition for an association with mass atrocities. Perhaps this belief has to be complemented by the additional tacit assertion that this belief be universally accepted across the world—and hence accompanied by active proselytization—that makes it sufficient. This conjecture about the Judaic exceptionalism warrants further research. That said, it must also be emphasized that, using mass atrocities as a metric, my statistical analysis lends no support for the popular belief that Islam is more prone to violence than

[38] "The concept of Lebensraum was not solely responsible for the Holocaust, but powerfully connected a variety of imperialist, nationalist, and racist currents that would contribute to the murder of the Jews of Europe." Lebensraum, Holocaust Encyclopedia https://encyclopedia.ushmm.org/content/en/article/lebensraum

[39] Richardson's conclusion (1960, p. 245) was: "There were more wars between Christians and Moslems [*sic*] than would be expected from their populations, if religious differences had not tended to instigate quarrels between them."

[40] The claim that Israel, the only country where the majority population subscribes to Judaism, has been in existence only for about three-quarters of a century could not be a persuasive reason. Even in the post-WWII period (1946-2020), Judaism stands out as distinct from Christianity and Islam in its association with mass atrocity deaths.

Christianity. In fact, in the post-WWII era, Christianity has been associated with far more deaths in mass atrocities.

One might expect that evidence on the economic motives for mass atrocities come more from settler economies because they were necessarily territorial in nature. It is reasonable to posit that mass elimination was used in settler colonies to acquire territory. My evidence is consistent with this view. The quantitative data on this from the United States, Canada, Australia, and New Zealand, however, are extremely limited. And yet, it is known that the decline in the populations of the indigenous people has been massive. In America, the population of Native Americans after contact with Europeans declined catastrophically, though about 80% of the decline may have been due to European diseases to which the indigenous population did not have immunity. But even the remaining 20% of the Indigenous Peoples were subjected to exterminations, mass evacuations, confinement to reservations, and the willful appropriation of children—all motivated by the goal of reducing indigenous claims on their land.

The motivation for the appropriation of American Indigenous land was, of course, economic. But how was this appropriation justified? The view that rationalized it in the eyes of the English was Locke's (1689/1967) labor theory of property rights. Locke argued that if a man takes a piece of land from the commons and bestows labor on it, then the land becomes his private property.[41] In Locke's view, it is the act of conferring labor that makes a piece of land private property—subject to the proviso that enough land is left over for others. When English settlers came to America, they saw the Indigenous Americans were living off the land by hunting and gathering, which the settlers did not count as labor. So, the appropriation of land from the "commons" and the cultivation of it bestowed private property rights (Wood (2002), Harris (2004)). Despite being critical of the Biblical view of property, Locke's theory is based on the Christian premise that God gave property in common to all, but since a man has the God-given right to preserve himself, he has the right to confer his labor on a part of the common land and make it his own.

Esteban, Morelli, and Rohner (2015) have suggested that their model of mass atrocities could explain the appropriation of Indigenous American land. Along the same lines, we might wonder how different the casualties may have been if, counterfactually, the land had been colonized by

[41] This view is consistent with how evolution might have hardwired a sense of property rights in humans. See Eswaran and Neary (2014).

people of a different religion. Rummel's estimate of the number of deaths of Indigenous Americans, excluding the deaths from European diseases that they were not immune to, range from a minimum of 2 million to a maximum of 15 million.[42] Let us take the average of these and say 8.5 million genocidal deaths. Since the estimates of the effects of Christianity, Islam, and Buddhism on mass killings are statistically indistinguishable in this paper's empirical work, we are left with only Hinduism and Judaism as points of comparison. These religions consistently have shown a significant negative effect in the estimations relative to Islam (and Christianity). The regression coefficient of Hinduism on log mass atrocity deaths is −1.900 from Table 13. This suggests that, had America been colonized by people of the Hindu religion, all else constant, in this counterfactual the reduction in the number of American Native would have been a fraction, 0.15 ($= exp(-1.900)$), of the observed reduction. That is, conditional on the mass atrocities having occurred, the 8.5 million deaths would have been reduced to about 1.28 million. This number would have been 1.45 million had the colonizers' religion been Judaism. Religion certainly seems to mattered in the North American mass atrocities against the American Indigenous Peoples, an insight that complements that of Esteban, Morelli, and Rohner (2015).

One drawback of the analysis of this paper, among others, is that the effect of capitalism, which also is a powerful belief system, has not been addressed. I have accounted for communism as a religion but not capitalism. It might be objected that this is to rig the case in favor of capitalism, as if it were the natural system to adhere to. Capitalism, too, may lead to mass deaths that are normally not ascribed to it. Another shortcoming is that this paper does not separate out different denominations of the same religion. I hope that scholars will address these issues in the future.

Finally, I end with by reiterating that causality is well-nigh impossible to establish with the data I have. So, I have sought only to isolate correlations in this endeavor, but even those are offered tentatively.

[42] Rummel's estimates are available at http://www.hawaii.edu/powerkills/DBG.CHAP3.HTM. He says, "In any case, judging by the bloody history of this period of colonization throughout the Americas, a democide of 2,000,000 would seem a rough minimum and 15,000,000 dead a maximum. Even if these figures are remotely true, then this still make this subjugation of the Americas one of the bloodier, centuries long, democides in world history." Stannard has estimated that in the Americas, around 100 million indigenous deaths (after accounting for vulnerability to European diseases).

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APPENDIX

Table 10.A – Mass Atrocity Deaths Associated with the 5 Major Religions without highest 5% fatalities

Dependent Variable: Log Fatality Rate						
	1800-2020		**1901-2020**		**1946-2020**	
	Full sample	**Excluding 5% highest**	**Full sample**	**Excluding 5% highest**	**Full sample**	**Excluding 5% highest**
Polity Index	-0.967*	-1.069**	-0.666	-0.440	-0.791	-0.672
	(0.518)	(0.430)	(0.516)	(0.437)	(0.694)	(0.566)
Ethnic Diff.	0.286	0.382	0.436	0.338	0.305	0.319
	(0.283)	(0.286)	(0.325)	(0.283)	(0.414)	(0.436)
Relig. Diff.	1.008***	0.858**	1.019**	0.854*	1.375***	1.226**
	(0.383)	(0.382)	(0.427)	(0.436)	(0.482)	(0.473)
World War	1.400***	1.368***	1.430***	1.309***	--	--
	(0.334)	(0.320)	(0.349)	(0.318)		
Local War	0.439	0.452*	0.646**	0.562**	0.897***	0.750**
	(0.265)	(0.251)	(0.266)	(0.260)	(0.302)	(0.290)
Population Density	-0.167	-0.081	-0.045	0.046	-0.235	-0.132
	(0.140)	(0.126)	(0.140)	(0.130)	(0.141)	(0.128)
Log Population	0.445***	0.576***	0.549***	0.528***	0.382**	0.375**
	(0.105)	(0.089)	(0.112)	(0.106)	(0.152)	(0.151)
Colony	0.429	0.518	-0.032	0.174	-0.202	-0.041
	(0.397)	(0.367)	(0.509)	(0.490)	(0.700)	(0.673)
Settler Colony	0.416	0.519	0.778***	0.680***	0.986***	0.767***
	(0.380)	(0.346)	(0.276)	(0.248)	(0.352)	(0.286)
Log of Perp.'s per cap. Income	-0.500**	-0.536***	-0.537***	-0.543***	-0.251	-0.313
	(0.205)	(0.201)	(0.197)	(0.197)	(0.216)	(0.223)
Income Ratio	0.100***	0.088***	0.087***	0.086***	0.077***	0.076***
	(0.022)	(0.019)	(0.023)	(0.022)	(0.022)	(0.021)
Communism	0.773	0.815*	0.665	0.657	-0.095	-0.602
	(0.502)	(0.448)	(0.495)	(0.521)	(0.605)	(0.444)
Buddhism	1.178**	1.218*	1.142**	0.962	0.647	0.580
	(0.536)	(0.622)	(0.543)	(0.615)	(0.573)	(0.643)
Christianity	-0.406	0.038	-0.128	0.216	-0.237	0.300
	(0.449)	(0.442)	(0.458)	(0.466)	(0.626)	(0.581)
Hinduism	-2.211***	-2.415***	-2.205***	-2.186***	-2.029***	-2.050***
	(0.439)	(0.437)	(0.474)	(0.477)	(0.489)	(0.513)
Islam	--	--	--	--	--	--
Judaism	-2.088**	-1.472*	-2.179**	-1.756**	-3.372***	-2.761***
	(0.936)	(0.837)	(0.855)	(0.740)	(1.007)	(0.888)
Time Trend	-0.011**	-0.005	-0.018**	-0.016**	-0.021**	-0.017**
	(0.005)	(0.004)	(0.007)	(0.007)	(0.009)	(0.009)
Duration of Conflict	0.003	0.003	0.032***	0.030***	0.024*	0.021*
	(0.005)	(0.004)	(0.010)	(0.010)	(0.013)	(0.012)
No. of Obs.	328	312	285	271	176	168
R-Squared	0.384	0.419	0.412	0.425	0.436	0.418
Perp.'s Ethnicities Dummies	Yes	Yes	Yes	Yes	Yes	Yes

Table 13.A: Log Fatalities for 1901-2020 without highest 2% fatalities

Dependent Variable: Log Fatality Rate				
	With Traditional Religions		**With Communism as a "Religion"**	
	Full Sample	**Excluding 2% highest**	**Full Sample**	**Excluding 2% highest**
Polity Index	-1.050*	-0.564	-1.101*	-1.078*
	(0.619)	(0.605)	(0.601)	(0.604)
Ethnic Diff.	0.401	0.869*	0.416	0.450
	(0.327)	(0.508)	(0.325)	(0.323)
Relig. Diff.	1.044**	1.602*	1.013**	1.017**
	(0.420)	(0.840)	(0.412)	(0.410)
World War	1.405***	1.329***	1.405***	1.281***
	(0.348)	(0.362)	(0.346)	(0.345)
Local War	0.661**	0.590**	0.758***	0.740***
	(0.270)	(0.280)	(0.261)	(0.265)
Population Density	-0.063	-0.033	-0.064	-0.035
	(0.141)	(0.136)	(0.141)	(0.132)
Log Population	0.537***	0.569***	0.480***	0.516***
	(0.109)	(0.106)	(0.105)	(0.103)
Colony	-0.072	-0.005	-0.124	-0.060
	(0.507)	(0.513)	(0.512)	(0.516)
Settler Colony	0.839***	0.822***	0.841***	0.866***
	(0.296)	(0.304)	(0.302)	(0.304)
Log of Perp.'s per cap. Income	-0.519**	-0.486**	-0.530**	-0.506**
	(0.209)	(0.208)	(0.213)	(0.211)
Income Ratio	0.076***	0.060**	0.076***	0.071***
	(0.024)	(0.024)	(0.024)	(0.024)
Common Law	--	--	--	--
Civil Law	0.125	-0.028	0.162	0.054
	(0.417)	(0.413)	(0.422)	(0.427)
Muslim Law	0.642	0.635	0.610	0.544
	(0.684)	(0.703)	(0.682)	(0.685)
Communism	0.702	0.799	0.529	0.561
	(0.508)	(0.492)	(0.609)	(0.595)
Buddhism	1.164**	0.882	0.963	1.048
	(0.553)	(0.658)	(0.694)	(0.708)
Christianity	-0.139	-0.110	-0.251	-0.268
	(0.448)	(0.415)	(0.514)	(0.500)
Hinduism	-2.119***	-1.973***	-1.900***	-1.921***
	(0.471)	(0.721)	(0.617)	(0.619)
Islam	--	--	--	--
Judaism	-1.799*	-1.190	-1.761**	-1.714*
	(0.918)	(1.434)	(0.877)	(0.870)
Christianity x Democracy	0.761	0.578	1.016**	0.870*
	(0.502)	(0.519)	(0.501)	(0.511)
Time Trend	-0.019***	-0.019***	-0.019***	-0.019***
	(0.007)	(0.007)	(0.007)	(0.007)

Duration of Conflict	0.031*** (0.010)	0.031*** (0.010)	0.030*** (0.011)	0.030*** (0.010)
No. of Obs.	285	280	285	280
R-Squared	0.418	0.428	0.420	0.423
Perp.'s Ethnicities Dummies	Yes	Yes	Yes	Yes