Development, Democracy, and Mass Killings[*]

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This draft: December 2005

Abstract

Using a newly assembled dataset spanning from 1820 to 1998, we study the relationship between the occurrence and cruelty of episodes of mass killing and the levels of development and democracy across countries and over time. We find that massacres are more likely at intermediate levels of income and less likely at very high levels of democracy, but we do not find evidence of a linear relationship between democracy and probability of mass killings. In the XXth century, discrete improvements in democracy are systematically associated with less cruel massacre episodes. Episodes at the highest levels of democracy and income involve relatively fewer victims.

When human lives are endangered, when human dignity is in jeopardy, national borders and sensitivities become irrelevant. Whenever men or women are persecuted because of their race, religion, or political views, that place must - at that moment - become the center of the universe.
Elie Wiesel

I. Introduction

The 20th century closed with many lamenting civilian killings by the state (including genocide) as its greatest evil. By one estimate, governments killed as many as 170 million civilians from 1900 to 1987 – more than all the soldiers killed in the wars of the 20th century.[1] The century closed with a new euphemism for killing and deportation: "ethnic cleansing." Massacres in the Balkans and the 1994 Rwandan genocide led to much ex post agonizing about what international policymakers could do to prevent or stop mass killings of civilians The new millennium has already featured killings of people whose sole fault is their membership in a group defined by the killers. Killing innocent people, even when the numbers are small relative to population, leaves indelible human scars in the affected groups and a lasting mark on subsequent politics.

Even granting that it is a great evil, however, why should development economists study mass killings when a vast literature by political scientists and other researchers already exists (see references in Charny,1999, as well as our own bibliography)? The first reason is the broader definition of development increasingly adopted by many academics and development practitioners, which includes many aspects of well-being besides just measuring GDP. Freedom from the risk of being killed by the state, and freedom from having your "group" being the target of violence, is surely an important component of social well-being. The second is that political violence has major consequences for economic development even in the narrow sense, sometimes with

decades of development efforts undone by outbreaks of violence. The third is that the likelihood of political violence may depend on economic incentives and behaviors. Due to such considerations, political violence (especially civil war) has recently become a major subject for research among economists. [2]

Due in part to the recent literature on political violence, violence (and its corollary, the breakdown of state authority or "state failure") has become something that international development policy makers like the World Bank, United Nations, or OECD seek to address. Altogether, five different articles in *Foreign Affairs* in the past few years have analyzed what international policy makers could do about failed states.[3] In a recent report, the World Bank made the claim "Our new understanding of the causes and consequences of civil wars provides a compelling basis for international action. … International action … could avert untold suffering, spur poverty reduction, and help to protect people around the world from … drug-trafficking, disease, and terrorism."[4]

Although we are cautious in thinking that economic research can develop a comprehensive understanding of such a complex problem, we share the interest of the economics of violence literature in understanding the determinants of the many forms of political violence. This paper represents an important extension of that literature, as the phenomenon of mass killing has received little attention so far in the literature by

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[1] Rummel (1997).

[2] Some references from the large literature by economists includes Collier (1999), Collier and Hoeffler (1998, 2002a, 2002b, and 2004), Azam and Hoeffler (2002), Stewart et al. (2001), and Reynal-Querol (2002a and 2002b). See World Bank (2003) for a more comprehensive list of references.

[3] Sebastian Mallaby, "The Reluctant Imperialist: Terrorism, Failed States, the Case for American Empire," Foreign Affairs (March/April 2002); Chester Crocker, "Engaging Failing States," Foreign Affairs, (September/October 2003); Stuart Eizenstat, John Edward Porter, and Jeremy Weinstein, "Rebuilding Weak States," Foreign Affairs (January/February 2005), Stephen D. Krasner and Carlos Pascual, "Addressing State Failure," Foreign Affairs (July/August 2005), Stephen Ellis, "How to Rebuild Africa" Foreign Affairs (September/October 2005).

[4] World Bank (2003) p.168.

economists. Like civil war, mass killings seem a priori likely to have huge economic consequences, and to possibly be influenced by economic factors. More over, mass killings are one of the main components of definitions of "state failure."

Economic development is potentially a two-edged sword for mass killings of civilians by the state. On the one hand, economic development leads to increased education that might promote greater tolerance of other groups besides one's own. From a more cold-hearted calculation, economic development is an increase in the productivity of labor and hence the value of human life. On the other hand, economic development brings advances in technology and social organization that lower the cost of mass killings. Murderous political leaders can use advanced technology and social organization to kill.

One factor that might resolve the ambiguity between development and massacres is institutions. Good institutions will presumably increase the likelihood that technology and organization are used for benevolent ends. The most obvious institution that has been developed to ensure benevolent governments is democracy, which places limits on the ability of the executive to carry out destructive acts against the electorate. Indeed, one of the most famous hypotheses about genocide is that "power kills; absolute power kills absolutely" (Rummel, 1997).

However, again there is some ambiguity about the relationship between democracy and episodes of massacre and genocide. A majority of the population may democratically agree on the killing of an unpopular minority. Famous historical examples are the democratic governments in Australia, Canada, and the United States

who killed indigenous peoples. So it is still an open empirical question about whether democracy successfully turns economic development towards benevolent ends.

These are the questions that motivate our study.

The contribution of this paper is twofold. First, using historical records and sources, we compile a new dataset listing occurrence and cruelty of episodes of mass killing by the state over the XIXth and XXth century. We then couple this information with historical series on the extent of democracy and on GDP and conduct a systematic analysis – to our knowledge the first of its kind – of the relationship among these variables.

The paper is structured as follows. Section II discusses the definitions of our main variables and section III describes data sources and summary statistics. Sections IV and V discuss regression results and robustness checks. Section VI concludes.

II. Defining mass killing episodes

In the process of identifying episodes of mass killings of civilians by the state one has to confront the question of defining genocide. There are many contentious issues in this field. First, a number of scholars – especially in the past – have disputed whether comparative analysis of genocide is at all meaningful, given the unique characteristics of each episode, however genocide is defined. Nonetheless, more and more scholars have recently advocated the use of comparative research on genocide as an instrument to understand which underlying conditions are more likely to put a polity at risk. In the words of Barbara Harff, one of the most prominent scholars in the current literature, "All cases have unique properties but also share some discernible patterns with others, from

which social scientists can identify some common sequences and outcomes" (Harff, 1992, p. 30).

Although in 1948 the United Nations adopted an official definition of genocide, scholars are far from agreeing on how genocide should be defined, often arguing over narrow versus more inclusive definitions. A narrow definition, for example, is that genocide must involve the intention to exterminate an ethnic group. There are very few such episodes, with scholars usually referring to the Nazi Holocaust of the Jews and, more recently, the Hutu killings of Tutsis in Rwanda. This definition would leave out mass killings of political victims, such as those in Cambodia, China, and the USSR. In the view of many scholars, massacres of political victims should also be including in a more comprehensive definition of genocide (see, for example, Harff, 1987, who focuses, amongst others, on politicides – i.e. genocides, where victims are defined primarily in terms of their political opposition to the regime and dominant group; and Horowitz, 1997). According to others, instead, the clear intent to eliminate a group (where a group and membership in it are defined by the perpetrator and not by external fixed criteria) is the relevant element that distinguishes a genocide from other gross human rights violations (Chalk and Jonasshon, 1987).

A complementary approach is that of classifying genocides based on the motives of the perpetrators, whether these were desire for revenge – as it was typical of ancient times (examples are the massacres perpetuated by Genghis Khan); an accessory to military conquest, as it was often the case in the middles ages; or a means to monopolize power or to impose an ideology (Smith, 1987).

Within this debate, there are a few elements of general convergence. For example, authors uniformly stress the disparity of power between perpetrators and the victim group as a typical characteristic of genocide and tend to exclude victims of warfare and bombings.

In this work, we define episodes of mass killings following the highly inclusive definition of Charny (1999, p. 7):

> Genocide ... is the mass killing of substantial numbers of human beings, when not in the course of military action against the military forces of an avowed enemy, under conditions of the essential defenselessness and helplessness of the victims.

The word genocide has become politically explosive, with states threatening reprisals against other states that publicly identify a historical episode as a "genocide". Other political activists have watered down the definition to label almost any government policy (abortion, economic sanctions, monetary policy) as "genocide" against some group. A search on the word "genocide" on Yahoo turned up 141,000 web pages.

To stay out of politics while at the same time communicating clearly, we adopt the following compromise. Throughout the paper we refer to episodes interchangeably as "mass killings" or "massacres". We do not intend this wording to be a euphemism for "genocide," since we not believe that all episodes in our sample were genocides. We simply avoid the loaded word "genocide" altogether. We adopt the broad definition advocated by Charny in the paragraph above for "mass killings." In most cases, the state is either actively or passively involved in the killings, although there are some borderline cases where we cannot distinguish between people killed by state forces versus other armed forces.[5] Note that we do not identify episodes ourselves, but we include in our

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[5] In particular, we do not include in our definition victims from international wars.

sample episodes that have been identified as mass killings over the past two centuries by other academic researchers. The standard generally followed by these researchers is compatible with Charny's definition.

We choose the last two centuries because that is the period over which democracy and income data are available. In this sample, we counted a total of 163 episodes of mass killings in 71 countries.

A research assistant and one of the coauthors, who did not hold any priors with respect to the relationship among development, democracy, and mass killings, performed the literature search. Given limited resources to search the literature, we cannot argue that our list is exhaustive. We could hope that such errors of inclusion and exclusion are random, so that we can still estimate unbiased coefficients on the variables of interest, development and democracy.

Unfortunately, there is likely to still be some association between probability of inclusion in the sample and our right-hand side variables. Societies that are more democratic, and thus have freedom of speech and press, are more likely to record any episodes of mass killings, while authoritarian societies may keep mass killings a secret from the history books. This is likely to generate a selection bias against mass killings that occur in less democratic societies.

In addition, societies at a lower level of income are less likely to have information on the democracy level of their regime, or they are a colony of another nation and so are not counted in the democracy sample. Low income also makes it more likely that income itself will not be recorded. Hence our sample that includes observations on mass killings,

development, and democracy is likely to under-represent low-income societies. However, these problems are common to similar cross-country studies.

III. Data description

Our income data are drawn from different sources. For the 19th century, Maddison estimates income in 1820, 1850, and 1870, and then yearly after 1870. This procedure might be thought to under-represent the middle-income experience of today's industrial countries, which took place mainly between 1820 and 1870. We know with some degree of approximation that income was in the middle-income range in the intervening years if it was in the middle-income range in both 1820 and 1850, and likewise with 1850 to 1870. In order to maximize the size of our sample and, in particular, to obtain sufficient data for the XIXth century, we interpolate income linearly from 1820 to 1850 and from 1850 to 1870. Income data for the period 1950-1990 is drawn from Summers and Heston and is updated and filled in with World Bank National Accounts per capita growth rates up through 1998.

Measuring democracy is more problematic as there are many angles to its definition. For example, democracy can be measured as a continuum representing the degree to which coercive regime power penetrates and controls political and socio-economic institutions; as the degree of effective political competition; or as the degree of concentration and centralization of political power (Rummel, 1997). Although there exist in the literature a number of indicators that are meant to capture the different dimensions of democracy, none of them is available for the period that our data span. To be able to analyze our full data set, we use a democracy variable from the well-known Polity III

project at the University of Maryland that covers an exceptionally long period: 1800-1998. This variable captures important procedural elements of democratic institutions.[6] In particular, it measures the degree of openness of the political process by ranking regimes according to the competitiveness of participation to political life (i.e. the extent to which non-elites are able to access institutional structures for political expression); the type of competition for executive recruitment (i.e. the extent to which executives are chosen through competitive elections); the openness of the executive recruitment (i.e. the opportunity for non-elites to attain executive office); and, finally, the degree of constraints on the executive (i.e. the operational independence of chief executive). The index is measured on a scale from 0 to 10. Its construction is described in detail in Appendix I. Mass killings episodes are listed and described in Appendix II.

IV. Descriptive analysis

We first present some descriptive analysis of the association between development, democracy, and mass killings. In the following sections, we will discuss formal econometric analysis of the data.

Our data are characterized by infrequent mass killing episodes taking place over the period 1820-1995 and by strings of missing values in the income data, especially as far as the XIXth and the beginning of the XXth century are concerned. The peculiar structure of the data makes the choice of how to setup the timing of the regressions – whether in a single cross-section, by century, decades or year – particularly relevant. Arranging the data by decades allows us to strike a reasonable balance between being

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[6] We should also note that some definitions of democracy (a regime could be defined democratic if it does not commit massacres, genocides, etc) would be tautological in the context of this paper (Jonasson, 1990).

able to link episodes of mass killings to income levels relatively close in time and avoiding a misleading multiplication of observations that would occur, for example, with annual data.

To identify massacres we use a dummy for those years and countries in which a mass killing episodes occurred. In our setup, this amounts to having an indicator variable taking value of 1 if a massacre occurred in the decade. In this sense, this dummy measures the frequency of mass killings but not their magnitude, as it does not use information on the number of victims. We then present data on the estimated numbers of victims associated with each episode. These estimates are usually given in the original bibliography as a range of estimated victims, and we take the mean of the minimum and maximum of the available estimates.

To summarize the interrelationships among democracy, development, and mass killings, we segment the sample of more than 1000 observations into quartiles of income per capita and democracy. Cutoffs for income quartiles are at $908, $1671 and $3619 in 1985 dollars. The low quartile of democracy is at zero, while the other cutoffs are at 3 and 8.78. Figures 1-4 show the frequency and number of mass killings in the different quartiles of development and democracy.

A simple correlation between massacre frequency and per capita income over the whole sample suggests a negative relationship between the two variables (correlation of -0.11). Interestingly, though, the graph of massacre frequency by income quartiles indicate that the unconditional relationship between the two is far from being linear – although massacres appear to be very frequent among the poorest countries and least frequent among the richest countries, they are most frequent in middle income countries (third

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Our index does not suffer from this problem.

quartile, see figure 1). When we split the sample by century, massacres are positively and significantly correlated with income in the XIXth century (correlation of 0.33) while they are less likely to occur in richer countries in the XXth century (correlation of –0.18). This is not surprising since most massacres recorded in the XIXth century were in fact perpetrated by imperialist (richer) countries in the context of their colonization policies.

Overall, mass killings are weakly negatively correlated with democracy (correlation of -0.08). The relationship between massacres and democracy is also not linear, with massacre frequency being the highest at intermediate levels of democracy (third quartile) while being the lowest among the countries with the highest level of democracy (see figure 2). Moreover, similarly to what we observe for the massacre-income relationship, massacres were more likely in relatively more democratic countries in the XIXth century, while democracy and mass killings are negatively correlated in the XXth century (correlations of, respectively, 0.42 and -0.16).

Table 1 presents democracy and income quartiles together in a 4 by 4 table. Again, we see some hints of results we will explore further – the relationship with income seems nonlinear, and controlling for income, democracy does not seem to have a straightforward relationship with the likelihood of mass killings. Overall, it is clear that the likelihood of mass killings is lower than in the rest of the sample at the highest quartiles of both democracy and income.

Table 1: Four by four classification of sample of mass killings by income and democracy quartiles[7]

Percent of sample with mass killings *(observations in each cell in italics)*		democracy quartile (4= most democratic)			
		1	2	3	4
Income quartile (4=richest)	1	**28%**	**24%**	**15%**	**33%**
		105	*86*	*40*	*3*
	2	**15%**	**13%**	**19%**	**44%**
		71	*83*	*70*	*9*
	3	**13%**	**25%**	**31%**	**12%**
		48	*51*	*85*	*50*
	4	**11%**	**11%**	**13%**	**4%**
		36	*18*	*31*	*148*

We next turn to data on the magnitude of mass killings.

Consistently with the setup of our dataset, we measure the magnitude of killings as the average number of victims per decade. Figures 3 and 4 plot the average number of people killed by decade by democracy and income quartiles.[8] The average number of victims appears to decrease monotonically with income per capita in the whole sample.[9] Interestingly, the highest average number of victims is not recorded at the lowest level of democracy (totally authoritarian governments) but at intermediate-low levels of democracy (second quartile). A look at sheer magnitudes returns a frightening picture (figure 5): our data suggests that an estimated 70 million people were killed in the past two centuries by non-democratic governments (first and second quartiles of democracy). In general, high democracy appears to be the single most important factor in avoiding large magnitudes of mass killings, as the highest quartile of the sample in democracy

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[7] Note that, as in the regression setup, these are decade average data. Thus, it only takes one mass killing in a year to identify a whole decade.

[8] The number of victims was assigned to decades as follows. We first calculated the average number of victims per year in each episodes; then we apportioned the average annual number of victims to the decades

accounts for only 0.1% percent of all the killings. These unconditional associations confirms Rummel's hypothesis that authoritarian power is an important predictor of large-scale killings. The contrast with the conclusions on frequency highlights the fact that killing episodes at high levels of democracy and income involved relatively few victims.

Another noticeable feature of the data is that a small number of episodes accounts for the majority of killings in the data. The five largest episodes – China 1850-73, 1920-48, and 1949-53, the USSR 1930-38, and Germany 1933-45 – account for 71 percent of all killings, and these episodes involve only three polities.[10] In order to avoid the obvious problems that this characteristic of the data would create in tobit regressions, we use as dependent variable the logarithm of average killings per decade.

Finally, there were some well-known large-scale killings on which we lack complete data on income or democracy, and are therefore excluded from the data. These are: Cambodia (1975-79); Poland (1945-47); Ex-Yugoslavia (1900-99); Rwanda (1994); Mozambique (1973-75).

V. Econometric analysis of mass killings

V.1 What makes mass killings more likely?

We first analyze the association between the probability that an episode of mass killing occurs and our main variables of interest, the levels of development and democracy of a country. We report estimates in table 2, where the dependent variable

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spanned by the mass killing. Because of this convention, information on the intensity of each episode cannot be captured by our data.

[9] Simple correlations suggest that this is the case also in each century.

[10] The USSR 1930-38 episode is split between low and medium development because of rising Soviet income in the 30s.

takes value of 1 if at least an episode of mass killing occurred during the decade and 0 otherwise.[11]

Due to the length of the time period considered, the number of variables that we can use as regressors is limited. Our main independent variables are average (log) per capita GDP over the decade (LNGDPPC, interpolated when missing) and level of democracy (DEMOCRACY). We also include in all of the regression a dummy for the XXth century to account for possible systematic differences in the occurrence of mass killings in the two centuries, as well as the log of the country's population to control for some basic country characteristics.

Although we experiment with a number of specifications, we should note a priori that teasing out the independent effects of income and democracy on mass killings might not be straightforward, since the correlation between the two variables over the whole sample is quite high (0.55).

One of the widely held tenets about mass killings is that democracy can prevent them (see for example Rummel, 1997, and Chalk and Jonassohn, 1990). We find that, when included alone in the regression, the level of democracy is significantly associated (at the 10% level) with a lower occurrence of mass killings (column 1). Nonetheless, and quite surprisingly, when we include income per capita in the regression, DEMOCRACY ceases to be significant.

We have seen that the unconditional relationship between frequency of mass killings and democracy is not monotonic. This suggests that it might be helpful to control for democracy in a flexible form. Consistently with the picture in figure 2, when we include indicators for democracy quartiles, mass killings appear to be relatively less

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[11] Note that, in this setup, an episode spanning two decades is effectively counted as two episodes.

frequent in the second and fourth quartile. Nonetheless, the estimated effects are not significant once we contemporaneously control for income levels (columns 5).[12] Similarly, a dummy identifying those countries with democracy above the median in the sample is not significant (column 6). Instead, a dummy for whether the country experienced continuous "perfect" democracy throughout the whole decade (i.e. whether the democracy index was equal to 10 for the whole decade) is significantly associated with lower occurrence of mass killings. This association survives the inclusion of income in the regression, both linearly and quadratically (columns 7 and 8). The effect is large. According to the point estimate, a jump towards "perfect" democracy would be associated with about 2/3 reduction in the probability of massacres (a decrease of 0.11 points from a sample average of 0.17). As for income, (log) GDP is in general negatively and significantly associated with the occurrence of mass killings. In particular, a quadratic specification seems to fit the data particularly well. The estimates suggest that the chances of massacres increase for income levels below about $900 per capita (corresponding to the lowest income quartile in the whole sample), while they decrease afterwards. The quadratic specification for income seems fairly robust to controlling for democracy in alternative ways. P-values associated with the likelihood ratio test are reported at the bottom of columns 4-7. [13]

A natural extension would be to control for both income and democracy flexibly. When we include in the regression dummies for democracy and income quartiles,

[12] If income is excluded from the set of regressors, mass killings are significantly less frequent among the countries in the fourth quartile of democracy.
[13] A rule of thumb indicates that this specification seems to predict the probability of the outcomes fairly well (83% of the cases).

massacres appear to be less frequent in countries at the highest income quartiles but, not significantly so in countries at the highest democracy quartile (column 9).

The simple correlations between mass killings and income suggest that this relationship has changed over time. In the XIXth century, mass killings were more likely in relatively richer countries, while in the XXth century, mass killings more likely to occur in poorer countries. This is not surprising when one realizes that many of the mass killings episodes in the XIXth were perpetrated by rich countries' governments in the process of establishing their authority on the colonies. In the XXth century, instead, mass killings tend to occur more frequently in relatively less developed countries. A similar unconditional result obtains for democracy. We explore these issues in detail in table 3.

First, we refine our basic specification by adding pre- and post- World Wars dummies. None of these is significant. Then we restrict the sample to the XX century. As before, we experiment with different specifications, including quadratic and linear income, and non-linear forms for both income and democracy (columns 2-5). Quadratic income has now a weaker fit, while linear income produces better estimates. Overall, it appears that mass killings in the XXth century are significantly less frequent in countries at the top quartiles of democracy and economic development. (column 5).

We are also able to explore the role of a few other potentially relevant correlates. For example, a growing body of literature has analyzed the role of ethnic fractionalization as an impediment to effective public policies and, ultimately, to economic growth and as a determinant of civil war (see for example Easterly and Levine, 1997, who discuss the role of ethnic fractionalization in "Africa's growth tragedy" and Collier and Hoeffler, 1999, who analyze the role of fractionalization in the context of civil wars). In our

analysis, understanding the role of the ethnic structure of a country is particularly relevant, especially as most of the episodes are classified as "ethnic or communal" killings. When we add to the basic specification the measure of ethnic fractionalization developed by Alesina et al. (2003), we find that the probability of mass killings is related quadratically to fractionalization. In particular, the chances of mass killing increase at levels of fractionalization below 0.46, a value slightly above the sample mean, and decrease thereafter (column 6). The fractionalization measure captures the probability that two randomly selected individuals will belong to different ethnic groups. Hence, a situation in which there are two groups with equal shares in the population would have a fractionalization index of 0.5, close to the maximum threat of massacres. A more ethnically fractionalized situation with many small groups may be less likely to erupt in killings of one group by another than one with fewer and larger groups.

Finally, we are able to correlate episodes of mass killings with indicator dummies for civil wars and colonial, imperial or international wars.[14] We find mass killings to be significantly more frequent during civil wars, and marginally so during colonial, imperial or international wars.

V.2 What makes episodes of mass killing more cruel?

We collected data on the estimated number of deaths associated with each mass killings episode. There is a substantial uncertainty on the estimated number of victims. For most episodes, we have interval estimates of minimum and maximum number of killings; sometimes, instead, the source reported average number of deaths. Our measure

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[14] Note that these indicators were built independently from our mass killings variable (Singer and Small, 1994).

of the number of victims is the average number of deaths, where the maximum (minimum) of the range is the maximum (minimum) number of deaths among all of the sources we draw upon. Given the large variation in the nature and magnitude of the episodes (combined with the presence of substantial outliers), using a log transformation of the data seemed a sensible choice.

Figures 6 and 7 depict unconditional relationships between (log of) average killings and, respectively, democracy and income per capita.

We apply tobit analysis to explore the relationship between the magnitude of mass killings, per capita income, and democracy. In parallel with the probit analysis, we experiment with different specifications − including linear and quadratic income, and non-linear specifications in democracy. All of the specifications include the (log of) population in order to provide a scale for the size of the country, and a dummy for whether the episode occurred in the XXth century.

The results, reported in table 4, suggest that there is evidence for an inverted U-shaped relationship between per capita income and killings. In particular, the number of victims peaks at around $1300 of per capita income (slightly below the sample average). In general, we find the magnitude of mass killing to be negatively associated with DEMOCRACY, but the weak statistical significance does not allow meaningful inferences.

We then investigate the relationship between income and killings allowing for different slopes in the XIXth and XXth century (table 5). We find that the quadratic relationship between income and killings still holds. Moreover, and more importantly,

democracy is now linearly associated with a lower number of victims (at the 10% level of significance, column 1).

Interestingly, we find no relationship between the magnitude of mass killings and ethnic fractionalization, while mass killings appear to be substantially larger if the episode occurred within a civil or international war (columns 2-5).

V. 3 Robustness checks

We test the robustness of our results by performing estimation under a set of alternative assumptions.

To the extent that we are interested in income as an explanatory variable for occurrence of mass killings, using interpolated income might introduce a further element of endogeneity in the relationship – episodes of massacres might cause substantial economic disruptions and drops in income, with the last occurring at different rates in different countries. In the context of our analysis, this potential problem should be weighed against the benefit of being able to work with a larger sample size and a more substantial representation of countries in the XIXth century. However, in order to make sure that our results are not driven by interpolation we run all of our regressions over the non-interpolated sample. We find that our main result related to income – that occurrence and magnitude of mass killings has a quadratic relationship with income – hold.

Similarly, results are virtually unchanged if lagged values of income and democracy are entered in the specification instead of contemporaneous values. These findings are reassuring but we do not claim that this resolves the intractable problem of causality between income (or democracy) and mass killings. We interpret our results as suggestive associations rather than decisive indications of causality.

One might also argue that our results are a product of the arbitrary decision of organizing the data by decades. To verify that this is not the case, we run all of our regressions on data organized by twenty-year periods. Here as well, our main results hold. Moreover, the organization of the data in ten year periods generates a possible built-in over-counting of episodes, when episodes start in one decade and finish in the following decade. To make sure that our results are not driven by any double counting of episodes, we run our probit specifications using as a dependent variable a dummy taking value of one in the decade when an episode began and zero otherwise. Also in this case, the quadratic relationship between income and mass killing occurrence persists and, similarly to the results reported in the previous tables, no linear relationship emerges between mass killings and democracy.

Finally, one could object that our data includes very heterogeneous episodes, particularly as the number of victims is concerned. Moreover, as we previously discussed, non-democratic governments might have made efforts to keep episodes of mass killings secret, implying potentially important selection issues for our right-hand side variable. However, we expect that episodes involving a relatively small number of victims will be more likely to remain secret, while large-scale episodes will sooner or later become known. To ensure that our results can be generalized beyond these concerns, we constructed two 0/1 variables that excluded, respectively, episodes with fewer than 200 and 500 victims. Our probit results are robust to the use of these alternative dependent variables.

All of these results are not reported in the text but are available upon request.

VI. Conclusions

In this paper we analyze the determinants of mass killings of unarmed civilians in the period from 1820 to 1998. To do so, we built a new data set (and the first one to our knowledge spanning for such a long time series) where we systematize episodes of mass killing and we study their relationship with the level of development and democracy across countries.

We find that episodes of mass killing are more likely at intermediate levels of income and are less frequent only at the highest levels of democracy – only countries scoring a perfect 10 (the highest level in our index) for the whole decade, appeared to have a lower chance of mass killings once we controlled for their income levels. This finding is surprising, especially in light of the vast literature that indicates lack of democracy as a necessary (though not sufficient) condition for gross human rights violations. However, we should be clear that lack of significance of democracy over most of its range is not the same as proof that democracy does not matter over this range; it is a lack of evidence that the effect of democracy over this range is nonzero rather than positive evidence that the effect is indeed zero.

A closer look at the data reveals that a number of massacre episodes were perpetrated by highly democratic countries. Most of these though are concentrated in the XIXth century, when these countries were engaged in colonial expansion. When we restrict attention to the XXth century only, we find, more reassuringly, that countries in the highest quartile of democracy are significantly less likely to be engaged in mass killings. We should note, however, that, even in this context, the relationship between the likelihood of a massacre and democracy is not linear, implying that we have only found evidence that an improvement in the openness of institutions translates into a lower

chance of massacres when countries move to the highest level of democracy. Finally, we find that in the XXth century, discrete improvements in democracy were associated with less cruel massacre episodes.

Our results are subject to a number of qualifications. First, as we are dealing with cross country estimates, there might be a number of confounding, unmeasured factors that make a causal interpretation of our results problematic. Second, and more important, the definition (and index) of democracy we adopt is limited to some specific features of the political process, namely the openness of political institutions. In democracies the majority has voice and representation and the fairness or openness of political institutions does not necessarily imply fair outcomes, unless specific clauses are embedded in the institutional setting (for example requiring qualified majority voting in the parliament, etc.). One should also note that in most cases of massacres perpetuated by democratic governments, the victims were not "voters" – in case of massacres in the imperialist period, they were citizens of the colonies, and even when the massacres were directed towards people within the polity (for example the Native Americans in North America), the victims did not have voting rights. One policy implication of our findings could be that democracy – an essential precondition – should be supplemented by human rights protection and other guarantees of individual rights to bring about beneficial outcomes for all.

Figure 1. Mass killing frequency at different quartiles of development (log of GDP per capita)
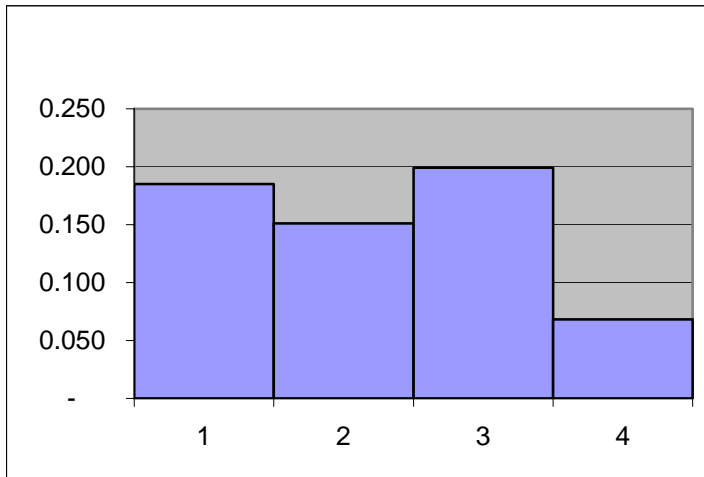
Figure 2. Mass killings frequency at different quartiles of democracy
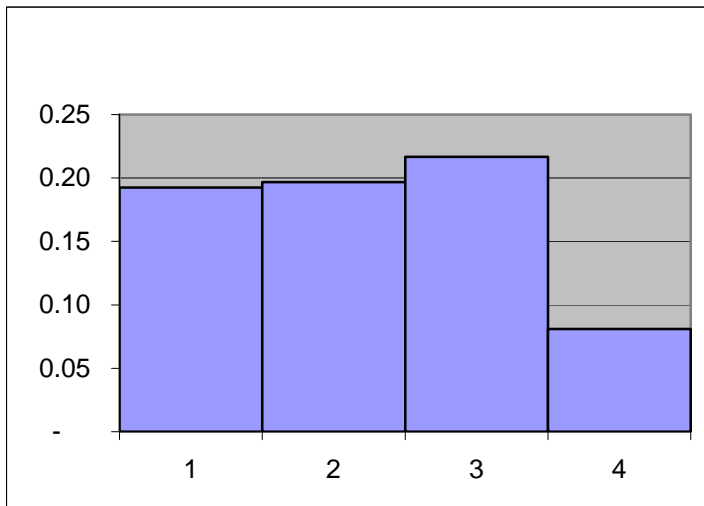
Figure 3. Average number of victims by quartiles of development (log of GDP per capita)

mean of total killed

160,000			
140,000			
120,000			
100,000			
80,000			
60,000			
40,000			
20,000			
0			
1	2	3	4
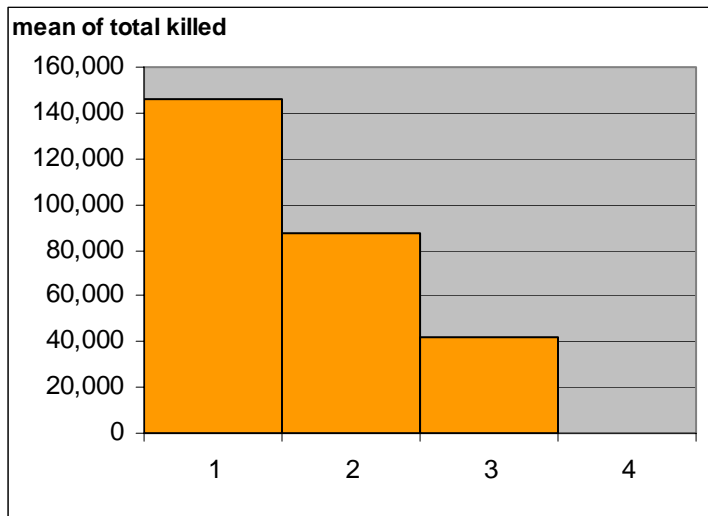
Figure 4. Average number of victims by quartiles of democracy

mean of total killed

250,000			
200,000			
150,000			
100,000			
50,000			
0			
1	2	3	4
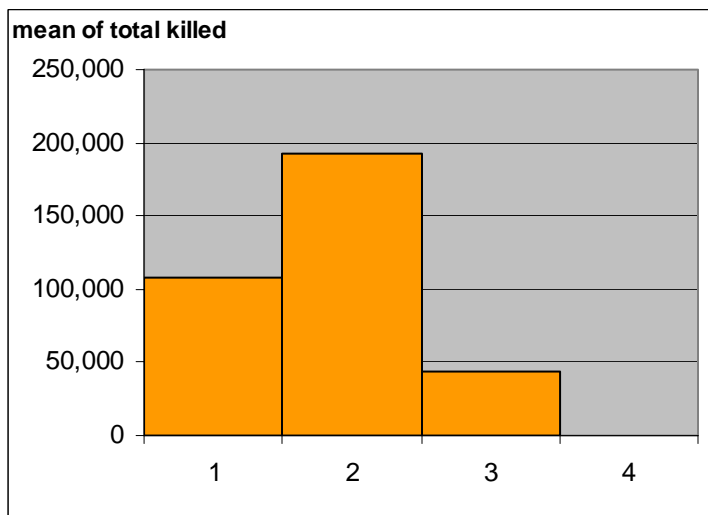
Figure 5. Absolute number of victims by democracy quartiles
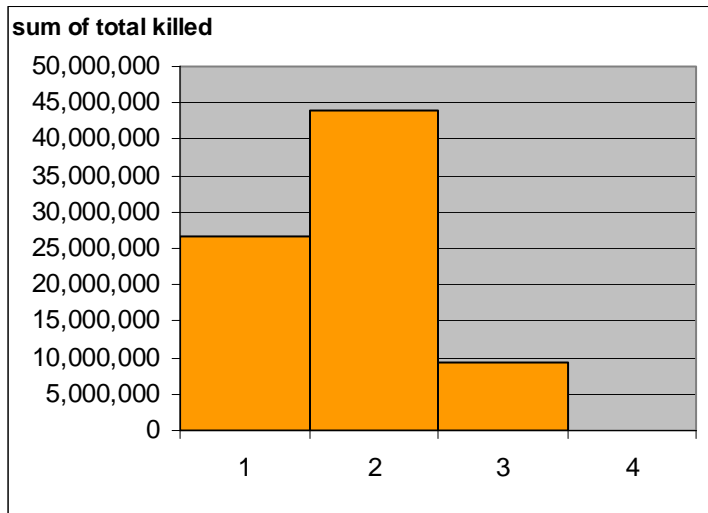
Figure 6. Average magnitude of mass killing episodes per decade (in logs) and per capita gdp (in logs)
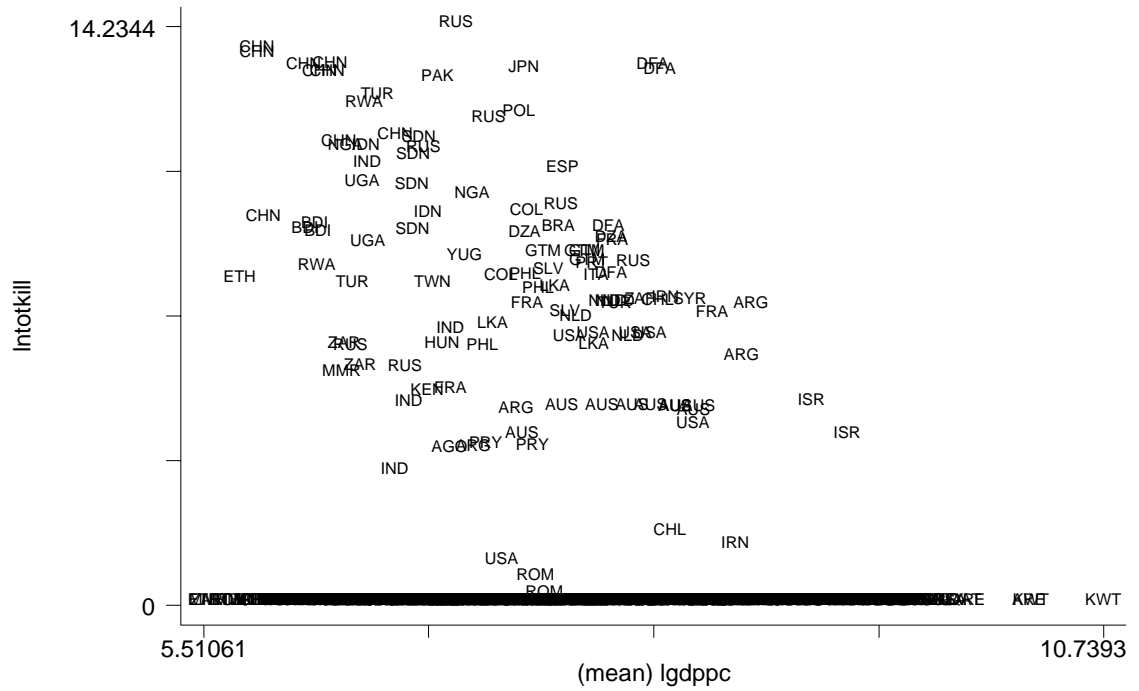
Figure 7. Average magnitude of mass killing episodes per decade (in logs) and levels of democracy

Table 2. Basic probit analysis. Dependent variable equals 1 if a mass killings episode occurred in a decade, 0 otherwise.

|	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
XX century	0.02	0.05	0.05	0.06	0.05	0.06	0.05	0.05	0.05
	(0.38)	(0.79)	(0.82)	(1.13)	(1.01)	(1.12)	(0.83)	(1.03)	(0.87)
DEMOCRACY	-0.01*		0.00	0.0018					
	(1.84)		(0.31)	(0.58)					
LGDPPC		-0.07***	-0.07***	0.70**	0.65**	0.67**	-0.03*	0.51	
		(4.17)	(3.32)	(2.28)	(1.98)	(2.26)	(1.69)	(1.60)	
LGDPPC2				-0.05**	-0.05**	-0.05**		-0.04*	
				(2.49)	(2.14)	(2.51)		(1.71)	
DEMO10							-0.13***	-0.11*	
							(2.61)	(1.80)	
DEMO_HIGH						0.03			
						(0.99)			
DEMO_QUART==2					-0.01				-0.01
					(0.46)				(0.45)
DEMO_QUART ==3					0.01				0.01
					(0.44)				(0.24)
DEMO_QUART ==4					-0.01				-0.04
					(0.18)				(0.72)
LGDPPC_QUART==2									-0.03
									(0.75)
LGDPPC_QUART ==3									0.01
									(0.12)
LGDPPC_QUART ==4									-0.14***
									(2.64)
LPOP	0.07***	0.06***	0.06***	0.07***	0.07***	0.07***	0.06***	0.06***	0.07***
	(6.13)	(5.62)	(5.60)	(6.04)	(5.91)	(6.05)	(5.91)	(5.93)	(6.01)
LR test, P-value for lgdppc&lgdppc2==0				0.00	0.00	0.00		0.00	
Observations	906	902	902	902	902	902	902	902	902

Table 4. Probit analysis. XX century sample and additional correlates.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sample	Full		XX century				
Betweenwars	-0.10						
	(0.32)						
WWII	0.37						
	(1.16)						
postWWII	0.33						
	(1.39)						
XX century						0.05	0.05
						(0.94)	(0.89)
DEMOCRACY	0.02	-0.03					
	(0.87)	(1.30)					
LGDPPC	3.49**	-0.31***	0.25	-0.05**		0.52	0.48
	(2.46)	(3.63)	(0.88)	(2.52)		(1.64)	(1.49)
LGDPPC2	-0.26***		-0.02			-0.04*	-0.03
	(2.67)		(1.05)			(1.79)	(1.55)
DEMO10			-0.12*	-0.14**		-0.10*	-0.08
			(1.94)	(2.42)		(1.72)	(1.34)
DEMO_QUART==2					-0.01		
					(0.38)		
DEMO_QUART ==3					-0.02		
					(0.55)		
DEMO_QUART ==4					-0.11**		
					(2.10)		
LGDPPC_QUART==2					-0.06*		
					(1.77)		
LGDPPC_QUART ==3					-0.04		
					(0.97)		
LGDPPC_QUART ==4					-0.13***		
					(2.81)		
EF						0.57*	
						(1.89)	
EF2						-0.66**	
						(2.01)	
CWAR_D							0.30***
							(6.82)
CIIWAR_D							0.06*
							(1.88)
LPOP	0.31***	0.30***	0.06***	0.06***	0.07***	0.06***	0.05***
	(6.27)	(5.59)	(5.78)	(5.83)	(5.66)	(5.67)	(4.47)
Observations	902	743	743	743	743	899	902

Dependent variable equals 1 if an episode of mass killing occurred in the decade, 0 otherwise. Robust z statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4. Basic tobit analysis. Dependent variable (log) average number of victims in a decade.

	(1)	(2)	(3)	(4)
XX century	0.33	0.28	0.30	0.27
	(1.11)	(1.07)	(1.27)	(1.21)
DEMOCRACY	-0.029		-0.01	
	(1.07)		(0.70)	
LGDPPC	-0.20*	-0.08	3.81**	2.76
	(1.88)	(0.77)	(2.23)	(1.61)
LGDPPC2			-0.26**	-0.19*
			(2.35)	(1.67)
DEMO10		-0.65***		-0.50*
		(2.80)		(1.86)
LPOP	0.39***	0.36***	0.39***	0.36***
	(7.37)	(7.70)	(7.58)	(7.45)
LR test, P-value for lgdppc&lgdppc2==0			0.00	0.06
Observations	846	846	846	846

Robust z statistics in parentheses * significant at 10%; ** significant at 5%; *** significant at 1%. Marginal coefficients are reported (unconditional expected value).

Table 5. Tobit analysis. XX century sample and additional correlates.

	(1)	*(2)*	*(3)*	*(4)*	*(5)*
Sample		XX century		Full	
DEMOCRACY	-0.04*	-0.05**			
	(1.86)	(2.22)			
LGDPPC	2.98*	-0.23**	2.28*	1.94	2.56**
	(1.79)	(2.26)	(1.67)	(1.47)	(1.52)
LGDPPC2	-0.21*		-0.15	-0.12	-0.18**
	(1.92)		(1.63)	(1.45)	(1.62)
LPOP	0.38***	0.40***	0.26***	0.21***	0.34***
	(7.27)	(7.08)	(5.88)	(5.08)	(6.51)
XX century			0.18	0.21	0.31
			(0.97)	(1.13)	(1.33)
EF					1.53
					(1.01)
EF2					-2.11
					(1.21)
DEMO10			-0.35	-0.33	-0.47
			(1.41)	(1.47)	(-1.80)
CWAR_D			1.98***	1.97***	
			(8.37)	(8.18)	
CIIWAR_D				0.42***	
				(2.62)	
Observations	698	698	846	846	843

Dependent variable (log) average number of victims in a decade. Absolute values of robust z statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%**..** Marginal coefficients are reported (unconditional expected value).

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APPENDIX I

Data Description

DEMOCRACY   Democracy index, ranging from 1 to 10 (measures the general openness of political institutions). The scale is constructed additively, using the following variables: PARCOMP (Competitiveness of participation: extent to which non-elites are able to access institutional structures for political expression); XRCOMP (Executive recruitment competition: extent to which executives are chosen through competitive elections); XROPEN (Executive recruitment openness: opportunity for non-elites to attain executive office); XCONST (Executive constraints: operational independence of chief executive). Whenever a modern polity originated from the merging of two or more old polities, the simple average of the constituting parts was used until the date of the union. Whenever an old polity broke up into two or more modern entities, the values for the bigger state were used until the date of the division. Source: Polity Project, University of Maryland, College Park; years 1800-1998.

DEMO10   Dummy for DEMOC=10

DEMO_QUART   Dummies for quartiles of DEMOC. First quartile: DEMOC equal to 0; second quartile: DEMOC between 0 and 3; third quartile: DEMOC between 3 and 8.78; fourth quartile: DEMOC bigger than 8.78 .

DEMO_HIGH   Dummy taking value of 1 if DEMOCRACY is above the median in the sample.

LGDPPC   Log of real GDP per capita in constant dollars (international prices, base year 1985). Source: Summers-Heston, years 1950-1998, and Maddison (1995), years 1820-1949.

LGDPPC_QUART   Dummies for quartiles of LGDPPC. First quartile: LGDPPC less than 6.81; second quartile: LGDPPC between 6.81 and 7.42; third quartile: LGDPPC between 7.42 and 8.19; fourth quartile: LGDPPC bigger than 8.19

LPOP   Log of population. Source: Global Development Finance & World Development Indicators, World Bank, years 1960-1998, and Maddison (1995), years 1820-1959.

XX CENTURY   Dummy for the 20th century.

EF   Ethnic fractionalization index. Measures probability that two randomly selected people from a given country will not belong to the same ethnolinguistic group. Source: Alesina et. al. (2003).

CWAR_D   Dummy for civil war. Source: Singer and Small (1994).

CIIWAR_D   Dummy for international, imperial or colonial war. International (interstate) wars are those fought among members of the interstate system. Imperial wars, involve an adversary that is an independent political entity but does not qualify as a member of the interstate system. Colonial wars include international wars in which an adversary was a colony, dependency or protectorate. Source: Singer and Small (1994).

APPENDIX 2

List of mass killing episodes

COUNTRY	YEAR	VICTIMS	SOURCE
Afghanistan	1880-1901	2,000-?: killings during unification by Abdur Rahman	Rummel (1997)
Afghanistan	1978-92	1.5 to 2 million: mass murder of supporters of old regime and rural supporters of rebels (many ethnic Pushtuns) by Afghan Communist puppet regime and then more systematically by Soviet forces	Fein (1992); Charny (1999)
Algeria	1945	103: attack on European settlers after WW II	Kuper (1981)
Algeria	1955	50 families: attack on European settlers during revolution	Kuper (1981)
Algeria	1962	12,000-150,000: mass murder of Harkis (French-Muslim troops) & OAS supporters	Fein (1992); Rummel (1997); Le Monde (2001)
Algeria	1992-98	70,000: killing of civilians by Islamic fundamentalists	Charny (1999)
Angola	1961-62	400: murder of Europeans during nationalist uprising	Collelo (1989)
Angola	1980-90	Massacre of indigenous group: San	Charny (1999)
Argentina	1879-81	1,500: indigenous peoples massacred in Patagonia	Rummel (1997)
Argentina	1976-80	9,000-30,000: mass murder of leftists	Fein (1992)
Australia	1824-1908	10,000: removal/killings of the Aborigines	Bell-Fialkoff (1996); Charny (1999)
Azerbaijan	1988	Massacre/eviction of Armenians	Bell-Fialkoff (1996)
Azerbaijan	1990	Massacre of Armenians	Bell-Fialkoff (1996)
Bangladesh	1979-99	Massacre of indigenous group: Tribals	Charny (1999)
Bosnia	1992-1995	Massacre of Bosnian Muslims by Bosnian Serbs	Charny (1999); Bell-Fialkoff (1996)
Brazil	1886-97	Massacre of the Canudos colony in Bahia.	Jonassohn and Bjornson (1995)
Brazil	1986-87	Massacre of indigenous group: Nambiquara	Charny (1999)
Brazil	1988	Massacre of indigenous group: Ticuna	Charny (1999)
Brazil	1988-89, 93	Massacre of indigenous group: Yanomami	Charny (1999)

COUNTRY	YEAR	VICTIMS	SOURCE
Brazil	1992	Massacre of indigenous group: Arara	Charny (1999)
Burundi	1965-73	103,000-303,000: mass murder of Hutu leaders & peasants	Fein (1992); Charny (1999)
Burundi	1969, 72, 88, 92, 93, 95	Massacres during Hutu-Tutsi conflicts	Bell-Fialkoff (1996)
Burundi	1993	60,000: massacres during Hutu-Tutsi conflicts	Charny (1999)
Cambodia	1975-79	1.5 million: massacre of ethnic Vietnamese, intellectuals, middle-class people	Andreopoulos (1994)
Cambodia	1975-79	Massacre of indigenous group: Cham	Charny (1999)
Canada	1500s-1900	Massacre of indigenous peoples	Charny (1999)
Central African Republic	1978-79	Brutality under the Bokassa regime against dissidents	Kuper (1981); Charny (1999)
Chile	1973-76	2,000-30,000: mass murder of leftists	Fein (1992)
Chile	1976-83	79: kidnapping and "disappearance" of leftists under the Pinochet rule	Charny (1999)
Chile	1986	Massacre of indigenous group: Mapuche	Charny (1999)
China	1850-1864	12,000,000: mass killings during Taiping Rebellion	Rummel (1997)
China	1855-1873	600,000: mass killings during Moslem Rebellion	Rummel (1997)
China	1860s	3,000,000: mass killings during Triad Rebellion	Rummel (1997)
China	1920s-1949	10 million: killing by nationalists before their final defeat on the mainland	Charny (1999)
China	1920s-1949	3.5 million: killing by Communists before their final victory on the mainland	Charny (1999)
China	1949-56	4,500,000 (until 1953): mass murder of landlords & rich peasants during land reform; mass murder of Kuomintang cadre	Charny (1999); Bell-Fialkoff (1996); Fein (1992)
China	1959-1979	1,200,000: Chinese occupation of Tibet	Freedom House (2001)
China	1966-75	400,000-850,000: Cultural Revolution victims	Fein (1992)
Colombia	1879	40,000	Rummel (1997)
Colombia	1948-58	180,000: "La Violencia" massacres by Liberal/Conservative governments	Charny (1999)
Colombia	1967-71	Mass killings of indigenous group: Cuiva	Charny (1999)
Colombia	1991	Mass killings of indigenous groups: Nunak, Paez	Charny (1999)

COUNTRY	YEAR	VICTIMS	SOURCE
Colombia	1999-2000	1,000-?: killing by right-wing paramilitary groups of alleged sympathizers of left-wing guerrillas	US State Dept (2000); Amnesty Int'l (1999)
Congo, Dem. Rep.	1977-?	3,000-4,000: mass murder of tribal opponents & political opponents of Mobutu	Fein (1992)
Croatia	1941-45	500,000-655,000: massacre of Serbs, Jews, and Gypsies during WW II	Charny (1999)
Croatia	1993-95	Cleansing of Muslim and Serbian civilians from Bosnia during Bosnia war	Charny (1999)
Cyprus	1955-1974	Greek-Turkey conflict over the territory	Bell-Fialkoff (1996)
Dominican Republic	1937	15,000-20,000: massacre of Haitians and black Spanish-speakers	Bell-Fialkoff (1996)
El Salvador	1932	30,000: "La Matanza": Government repression of Indians (Pipil) and peasants	Haggarty (1988)
El Salvador	1980-1992	20,000-70,000: mass murder of leftists	Fein (1992)
Equatorial Guinea	1969-79	1,000-50,000: mass murder of Bubi tribe & political opponents of Macias	Fein (1992)
Ethiopia	1974-79	30,000: mass murder of political opposition	Fein (1992)
Ethiopia	1984-85	Victims of forced resettlement	Fein (1992); Charny (1999)
France	1830	1,800: demonstrators shot during Paris Uprising	Rummel (1997)
France	1871	15,000: executions during Paris Commune	Rummel (1997)
France	1945	1,500 to 50,000 Muslims: reprisals from colonial authorities after attack on European settlers in Algeria	Kuper (1981)
France	1947-48	10,000-80,000: mass murder of Malagasy nationalists	Fein (1992)
France	1955	12,000 Muslims: reprisals from colonial authorities after attack on European settlers in Algeria	Kuper (1981)
Germany	1900-18	132,000: colonial massacres (among these: 65,000 during killings of Herero in German SW Africa between 1904-07)	Charny (1999); Rubenstein, Dobkowski and Wallimann (2000)
Germany	1933-1945	6 million Jewish people; 3 million Poles; 219,700 to 1.5 million Roma; 70,000 disables; 5,000 to 15,000 homosexuals; cleansing of communists and Jehovah's Witnesses	Bell-Fialkoff (1996)

COUNTRY	YEAR	VICTIMS	SOURCE
Guatemala	1960-96	200,000: mass murder of indigenous group (Maya) & Leftists	Charny (1999); Fein (1992); US State Dept (2001)
Haiti	1804	Massacre of the French colonists	Bell-Fialkoff (1996)
Hungary	1919	590: "Red Terror"	Burant (1989)
Hungary	1919	5,000: "White Terror"	Burant (1989)
Hungary	1941	Massacre of Yugoslav citizens, mostly Serbs	Bell-Fialkoff (1996)
India	1946-47	500,000: massacre and post-war flight of Muslims	Bell-Fialkoff (1996)
India	1968-82	1,000-3,000: mass murder of Naxalites	Fein (1992)
India	1984	5,000-10,000: killing of Sikhs during anti-Sikh violence	Charny (1999)
India	1992-93	Riots between Muslims and Hindus, violence mostly suffered by Muslims	Human Rights Watch (1995)
Indonesia	1965-67	500,000-1,000,000: anti-Communist, anti-Chinese massacre	Fein (1992)
Indonesia	1976-87	East Timor massacres by Indonesian army (68,000-230,000 killed between 1976-79)	Andreopoulos (1994); Charny (1999)
Indonesia	1989	Killings of indigenous group: Auyu	Charny (1999)
Iran, Islamic Rep.	1840s-1850s	20,000: Baha' is put to death	Rummel (1997)
Iran, Islamic Rep.	1979-84	210: campaign of persecution against the Baha'i community	Fein (1992)
Iran, Islamic Rep.	1981-?	10,000-20,000: mass murder of Kurds, Baha'is, & Mujahedeen	Fein (1992)
Iraq	1959-75	Mass murder of Kurdish nationalists	Fein (1992)
Iraq	1988	5,000: Iraqi Kurds victims	Andreopoulos (1994)
Iraq	1991	Cleansing of Kurds during Persian Gulf War	Bell-Fialkoff (1996); Cordesman (1994)
Israel	1948	254: Palestinians killed in Deir Yassin by Irgun and Stern gang	Bickerton and Klausner (1998)
Israel	1982	700-800: Sabra & Shatila massacre of refugees (mostly Palestinians) by Christian Phalangists in an area under Israeli control	Bickerton and Klausner (1998); Kahan, Barak and Efrat (1983)

COUNTRY	YEAR	VICTIMS	SOURCE
Israel	1987-1993	1,095 (800 until 1990): Palestinians killed by Israeli security forces during Intifada	Bickerton and Klausner (1998); Bloomberg (1993)
Italy	1937	30,000: Mass executions of Ethiopians by Italians, after failed assassination attempt against Graziani	Ofcansky and Berry (1991)
Japan	1935-39	4 to 6.3 million: massacre of Chinese, including Rape of Nanking (200,000 victims)	Charny (1999)
Japan	1935-39	20,000: massacre of Indonesian civilians by Japanese troops during WW II	Charny (1999)
Jordan	1920-21, 1929, 1946	Massacre of Jewish refugees	Bell-Fialkoff (1996)
Kenya	1991-94	1,500: violence in tribal clashes	Human Rights Watch (1995)
Lao PDR	1963-?	18,000-20,000: mass murder of Meo tribesmen	Fein (1992)
Lao PDR	1979-86	Mass killings of indigenous group: H'mong	Charny (1999)
Lebanon	1975-90	200,000: deaths during civil war caused by religious hatred	Human Rights Watch (1995)
Liberia	1990	600: massacre of refugees in a church by government troops	Charny (1999)
Mali	1988-90	Massacre of indigenous group: Tuareg	Charny (1999)
Mongolia	1929-32	Killings among monastic class, nobility and political opposition; collectivization and Party purges by Communists	Worden and Savada(1989)
Myanmar	1978	Mass murder of Muslims in border region	Fein (1992)
Myanmar	1988	3,000: army opening fire on peaceful pro-democracy demonstrations	Freedom House (2001)
Netherlands	1873-1913	30,000-100,000: massacre during occupation of Sumatra	Rummel (1997)
Nicaragua	1981-86	Massacre of indigenous group: Miskito	Charny (1999)
Niger	1988-90	Massacre of indigenous group: Tuareg	Charny (1999)
Nigeria	1966-70	1 million: massacre, expulsion and starvation of Igbos	Bell-Fialkoff (1996); Rosenbaum (1997)
Pakistan	1946-47	Massacre and flight of indigenous peoples	Bell-Fialkoff (1996)
Pakistan	1958-74	Mass murder of Baluchi tribesmen	Fein (1992)

COUNTRY	YEAR	VICTIMS	SOURCE
Pakistan	1971	1,250,000-3,000,000: mass murder of Bengali nationalists	Fein (1992); Charny (1999); Rummel (1997)
Papua New Guinea	1988	Massacre of indigenous group: Dani	Charny (1999)
Papua New Guinea	1990-91	Massacre of indigenous group: Nasioi	Charny (1999)
Paraguay	1962-76	900: mass murder of indigenous people (Ache)	Fein (1992); Charny (1999)
Paraguay	1990-91	Massacre of indigenous group: Pai Tavytere	Charny (1999)
Philippines	1968-85	10,000-100,000: mass murder of Moro (Muslim) nationalists	Fein (1992)
Philippines	1987	Massacre of indigenous group: Atta	Charny (1999)
Poland	1945-48	1,583,000: removal of Germans	Bell-Fialkoff (1996); Charny (1999)
Portugal	1961-62	40,000: mass murder of Bakongo during suppression of nationalist uprising in Angola	Fein (1992); Collelo (1989)
Romania	1907	10,000: Government suppression of peasant revolt	Bachman (1989)
Romania	1919, 36, 40, 49, 56, 59, 90	Romanian-Hungarian conflict in Transylvania (under Romanian control)	Bell-Fialkoff (1996)
Romania	1989-93	10: killing of Romas and burning of Roma homes by ethnic Romanians and ethnic Hungarians without government sanction	Human Rights Watch (1995)
Russian Federation, former USSR	1881	5,000: Turkmens slaughtered	Rummel (1997)
Russian Federation, former USSR	1881-1882	50-"a few hundred": Jews killed during wave of pogroms	Klier and Lambroza (1992)
Russian Federation, former USSR	1903-1906	3,188: Jews killed during wave of pogroms	Edelheit and Edelheit (1994)
Russian Federation, former USSR	1919	700,000: mass killing of the Cossacks during suppression of the Don Cossack revolt	Charny (1999)
Russian Federation, former USSR	1922-1941	Cleansing of the bourgeoisie, aristocracy, the kulaks	Bell-Fialkoff (1996)

COUNTRY	YEAR	VICTIMS	SOURCE
Russian Federation, former USSR	1930-37	6,500,000: cleansing of kulaks	Chalk and Jonassohn (1990); Charny (1999)
Russian Federation, former USSR	1932-33	5 to 7 million: artificially induced famine of peasants, mostly Ukrainians	Chalk and Jonassohn (1990); Charny (1999)
Russian Federation, former USSR	1937-38	1,000,000: execution of Communist Party members during the Great Terror	Charny (1999)
Russian Federation, former USSR	1940-53	Anti-nationalist deportation of the Balts in Estonia	Bell-Fialkoff (1996)
Russian Federation, former USSR	1943-47	500,000-1,100,000: mass murder of repatriated Soviet nationals	Fein (1992)
Russian Federation, former USSR	1943-57	230,000: mass murder of Chechens, Ingushi, Karachai & Balkars	Fein (1992)
Russian Federation, former USSR	1944-68	57,000-175,000: mass murder of Meskhetians & Crimean Tatars	Fein (1992)
Russian Federation, former USSR	1945-53	Cleansing of Jews, intelligentsia, etc	Bell-Fialkoff (1996)
Russian Federation, former USSR	1947-?	Mass murder of Ukrainian nationalists	Fein (1992)
Russian Federation, former USSR	1949	50,000 to 60,000: deportation of Estonians	Charny (1999)
Rwanda	1959-94	Massacres during Hutu-Tutsi conflicts	Bell-Fialkoff (1996)
Rwanda	1962-64	6,000-16,000: mass murder of Tutsi ruling class	Fein (1992); Kuper (1981)
Rwanda	1994	850,000-860,000: massacres during Hutu-Tutsi conflicts	Charny (1999)
Rwanda	1996-97	50,000-100,000: killings of Hutu refugees from Rwanda and Burundi in Congo by Tutsi army from Rwanda	Charny (1999)
Somalia	1988-89	Mass murder of Issak clan (Northerners)	Fein (1992)
South Africa	1980-90	Massacre of indigenous group in occupied Namibia: San	Charny (1999)

COUNTRY	YEAR	VICTIMS	SOURCE
South Africa	1990-94	14,000: political violence during the transition period before the first all-race election	Human Rights Watch (1995)
Spain	1936-39	430,000: killing of soldiers and civilians by Loyalists and Fascists during Spanish Civil War and more killing of Loyalists by Fascists after war	Charny (1999)
Sri Lanka	1958, 71, 77, 81, 83-86, 95	40,000: Tamil-Sinhalese conflict	Bell-Fialkoff (1996)
Sudan	1952-72	500,000: mass murder of southern nationalists	Kuper (1981); Metz (1991); Fein (1992); Rubenstein, Dobkowski and Wallimann (2000)
Sudan	1991-92	Mass killings of indigenous group: Nuba	Charny (1999)
Sudan	1992-93	Mass killing of indigenous group: Kinka, Nuer	Charny (1999)
Sudan	1983-99	1.5 million: total civil war deaths	Freedom House (2001); Kebbede (1999); US State Dept (2001)
Syrian Arab Republic	1981-82	5,000-25,000: mass murder of Muslim Brotherhood	Fein (1992)
Taiwan	1947	10,000-40,000: mass murder of Taiwanese nationalists	Fein (1992)
Turkey	1822-23	68,000: Greeks killed	Rummel (1997)
Turkey	1826	20,000-39,800: Janissaries massacred	Rummel (1997)
Turkey	1850	10,000: Mosul Assyrians massacred	Rummel (1997)
Turkey	1850	10,000: Kurdistan massacre	Rummel (1997)
Turkey	1860	11,000: Lebanon/Damascus massacre of Christians	Rummel (1997) Bell-Fialkoff (1996)
Turkey	1881	2,000: Alexandria massacre of Armenians/other Christians	Rummel (1997)
Turkey	1881	4,000: death sentences of Albanians	Rummel (1997)
Turkey	1892	3,500: massacre of Turkified Armenians and foreign soldiers	Rummel (1997)

COUNTRY	YEAR	VICTIMS	SOURCE
Turkey	1909	25,000-30,000: massacres of Armenians in Adana	Chorbajian and Shirinian (1998); Charny (1999)
Turkey	1876-79	15,000: killing/massacre of Bulgars	Rummel (1997)
Turkey	1894-96	200,000 (8% of total Armenian population in Turkey): massacres of Armenians by Kurds	Bell-Fialkoff (1996)
Turkey	1914-1918	Massacres/eviction of Nestorian and Jacobite Christians and the Maronites of Lebanon	Bell-Fialkoff (1996)
Turkey	1915-1918	Massacres of Armenians (1.5 million in Armenia; 30,000 in Baku; 32,000 in Shusha)	Bell-Fialkoff (1996)
Turkey	1924-1927	As many as 30,000: anti-Kurdish campaigns	Bell-Fialkoff (1996); Metz (1995)
Turkey	1922, 1974	30,000: massacre of Christians (mostly Greeks), forced population exchange with Greece	Bell-Fialkoff (1996)
Turkey	1937-38	Military campaigns against Dersim tribes of Kurds	Andreopoulos (1994)
Uganda	1971-79	100,000-500,000: mass murder of Karamojong, Acholi, Lango, Catholic clergy, & political opponents of Idi Amin	Fein (1992); Bell-Fialkoff (1996)
Uganda	1979-86	50,000-100,000: mass murder of Karamojong, Nilotic tribes, Bagandans, & supporters of Amin regime	Fein (1992)
USA	1500s-1900	Massacre of indigenous peoples	Charny (1999)
USA	1830s	17: expulsion of Mormon communities from the state of Missouri	Bell-Fialkoff (1996)
USA	Pre-20th century	25,000: total indigenous battle-dead/massacred/killed	Rummel (1997)
Vietnam	1953-54	15,000: mass murder of Catholic landlords & rich and middle peasants	Fein (1992)
Vietnam	1965-72	475,000: mass murder of civilian in NLF areas	Fein (1992)
Vietnam	1975-87	250,000: mass murder of "Boat people" (Vietnamese/Chinese)	Charny (1999)
West Bank and Gaza	1948	77: Israeli civilians killed by Arab troops on Mount Scopus (in response to Deir Yassin massacre)	Bickerton and Klausner (1998)
West Bank and Gaza	1987-1994	171: Israelis killed during Intifada	Bloomberg (1993)
Yugoslavia	1945-48	36,000 to 60,000: crush of Albanian resistance of Serbian rule in Kosovo	Bell-Fialkoff (1996)

COUNTRY	YEAR	VICTIMS	SOURCE
Yugoslavia	1991-95	200,000: killing of Muslims and Croats in Bosnia during Bosnia war.	Charny (1999); US State Dept (1999)
Yugoslavia	1999	10,000-100,000: cleansing of Albanian Muslims by Serbians during Kosovo war	Charny (1999)
Zimbabwe	1982-83	Killings of indigenous group: Tyua	Charny (1999)