Selected To Go Where Murderers Lurk?
The Preventive Effect of Peacekeeping on Mass Killings of Civilians*

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This study examines the preventive effect of peacekeeping on mass killings of civilians in intrastate conflicts. Peacekeepers may be sent to the most difficult conflicts. Control variables might capture the difficulty, for example, measures of the intensity of fighting. This is insufficient if there are factors that are difficult to pinpoint and measure that affect both the likelihood that peacekeepers are sent in and the risk of mass killings. Such unmeasured explanatory factors may bias our results. This paper applies a statistical technique, seemingly unrelated probit, that corrects for this problem and reveals a previously undetectable benign effect of peace keeping.

KEYWORDS: conflict prevention; genocide; mass killings; peacekeeping; seemingly unrelated probit; selection effects

Introduction

After increasing steadily over almost five decades, the number of intrastate armed conflicts began to decline dramatically following the peak year of 1992 (Harbom et al., 2008). The 2005 Human Security Report showed that the trends in genocide and human rights violations more generally have also been downward since the early 1990s (Mack, 2005). Contrary to widespread expectations, the so-called “New Wars” following the end of the Cold War have on average been less atrocious than the intrastate conflicts of the preceding decades of superpower rivalry and proxy warfare (Melander et al., 2009). The 2005 Human Security Report notes that with the end of the Cold War came an unprecedented upsurge of international activism.

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in areas such as mediation, peacekeeping and peacebuilding, and the authors of the report speculate that these activities caused much of the concomitant global reduction in political violence.

At the same time, there is widespread scepticism about the potential of international activism to substantially affect the conduct of those regimes and organizations that are willing to resort to war and mass murder to advance their agenda. This would seem to apply in particular to the perhaps worst atrocity, namely genocide. Most campaigns of systematic massacres of civilians begin in times of armed conflict.1 Whereas civil war is always destructive, some of the worst episodes of human cruelty and slaughter ever have occurred when fighting is combined with intentional mass killings. In the last two decades, peacekeeping missions have more frequently been deployed to countries in civil conflict as a means of promoting peace and, failing that, of curbing the worst excesses and alleviating the most acute deprivations. A first glance at the track record of peacekeeping may seem to suggest that there are good reasons to question whether deploying missions in ongoing civil conflicts is a good way of preventing genocide. Many of us have relatively fresh media images on our minds of peacekeepers finding themselves incapable of stopping ongoing massacres in their surroundings as in, for example, Bosnia-Herzegovina, Rwanda and Darfur. The spectacle of peacekeepers themselves being slaughtered by the murderers, as in Rwanda, or taken hostage, as in Bosnia-Herzegovina, suggests that the deployment of peacekeeping forces into active intrastate conflicts may even be counterproductive in that the international community is setting itself up for paralysis or humiliating defeat at the hands of the most ruthless killers. Half-measures undertaken by the peacekeepers may make matters worse for the civilians. For example, summarizing some of the literature on the catastrophes in Bosnia and Rwanda, Matthew Krain argues that “failure to protect ‘safe havens’ ... left a large group of targets unprotected, exposed, and centrally located, facilitating quicker extermination” (Krain, 2005: 368; referring to Betts, 1994: 24–25; Feil, 1998; Des Forges, 1999; Luttwak, 1999; Power, 2002; also Woocher, 2007).

In this study I examine the effectiveness of peacekeeping in preventing the onset of mass killings of civilians in intrastate conflicts. I show that a first glance at the historical record indeed seems to confirm that the deployment of peacekeepers is counterproductive in this regard: civilians in countries ravaged by civil war are more likely to be massacred when a peacekeeping mission is deployed in their country than when no peacekeepers are present. At a second thought, however, it should be evident that the first glance may be deceiving if peacekeepers tend to be sent to the most serious conflicts, where mass killings are feared the most. The

1 36 out of 46 episodes of genocide/politicide in the period 1955–2004 began in times of on-going intrastate conflict as defined in the Intrastate Disputes Data set by Mark J. Mullenbach. I have added one dispute year which is omitted by Mullenbach, namely Congo (Kinshasa) in 1964. This year is coded as a full-scale civil war (inflicting more than 1000 battle-related deaths) by the Uppsala Conflict Data Program (www.ucdp.uu.se). This year also saw the onset of a mass killing of civilians in the presence of a peacekeeping mission, which makes it particularly relevant for the purposes of this study. All the results reported here hold if the original coding of this year as a non-dispute is retained.
standard solution to this complication is to try to control for the seriousness of the conflict, so that we can compare the outcomes of equally serious conflicts when peacekeepers are present and when they are not.

If, the introduction of such controls notwithstanding, there are still unmeasured factors that simultaneously influence both the propensity to establish peacekeeping missions and the risk of massacres, this remedy is, however, inadequate. The results may be highly misleading. The solution is to explicitly take into account the unmeasured “seriousness” of the conflict and to model how this aspect—that we are unable to capture with variables available for a large number of civil conflicts—may be a factor in deciding to deploy peacekeepers as well as part of what drives the onset of massacres. This is the approach that I follow in this study. I argue that decision makers have access to some information from intelligence agencies, media and non-governmental organizations about the intentions and capacities of the warring parties, and that all else equal they will tend to dispatch peacekeeping missions to those conflicts in which civilians are most at risk. In line with this argument, I estimate a seemingly unrelated probit model that simultaneously predicts peacekeeping and the onset of mass killings of civilians, taking into account the correlation between the disturbances of the equations. This correlation reflects the omitted factors (Greene, 2003: 717).

My results differ dramatically between the regular single equation probit model of onset of mass killings given peacekeeping and the seemingly unrelated probit that estimates peacekeeping and massacres jointly. The standard probit approach produces the disturbing result that peacekeeping has no discernable preventive effect on mass killings, even if a host of relevant control variables are added. The joint model, in contrast, demonstrates that peacekeeping does significantly reduce the risk of mass killings when we take into account that peacekeeping missions are more likely to be established in the most difficult conflicts. What is more, the correlation between the disturbances of the two equations in the joint model is significant, which confirms that there are indeed omitted factors that influence both peacekeeping and mass killings and that the joint model thus is superior to the simpler model.

This is the first quantitative study that examines the effect of peacekeeping in ongoing intrastate conflicts on the risk of mass killings of civilians. The study also contributes to our knowledge about peacekeeping in that the applied technique reveals that peacekeepers tend to be sent to the potentially most deadly situations, where mass murderers lurk. Since it is especially costly and risky to deploy peacekeeping missions to active conflicts, the results presented here speak to burning policy dilemmas. This study is policy relevant not only because genocide and politicide are perhaps the worst atrocities committed in times of civil war, but also because numerous studies have found that higher human costs negatively affects the chances of lasting peace after the killing has ended (Doyle and Sambanis, 2000: 787; Bigombe et al., 2000: 339; Hartzell et al., 2003: 198; Fortna, 2003: 107, 2004: 287). A better understanding of the conditions under which peacekeeping may prevent mass killings may thus ultimately contribute to a reduction in armed conflict, provided that the insights gained are applied by policy makers.
The Relationship between Peacekeeping and Mass Murder

This study is concerned with the onset of mass killings of civilians in times of intrastate conflict, and the extent to which such atrocities can be prevented through the deployment of third-party peacekeeping missions. That which is to be explained is thus the onset of mass killings, and the main explanatory factor investigated is peacekeeping. The theoretical rationale behind the study consists of two main arguments. The first involves the possibility that peacekeepers, all else equal, tend to be sent to those conflicts in which the civilian population is deemed to be most at risk of being massacred. The second argument concerns the way in which deployed peacekeepers may reduce the risk that actors in intrastate armed conflict will resort to mass killings of civilians.

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Although quite a few works deal with the issue of where peacekeeping missions are sent, most of these examine only the conflicts to which missions were dispatched, and not the comparison cases that did not see any peacekeeping. Fortna (2004, 2008) uses a sophisticated multivariate analysis of a sample of conflicts that ensures a variation in the dependent variable, but her focus is somewhat different from ongoing conflicts, namely “among civil wars that reach some sort of break in the fighting, what distinguishes those that see peacekeeping from those that do not?” (2008: 20; for a recent overview of this literature, see Fortna, 2008). The theoretical point of departure of this study is that some of the factors that drive the deployment of peacekeeping missions are likely to be related also to the risk that civilians will be massacred. Several such potential joint determinants of peacekeeping and mass killing will later be introduced as control variables. Crucially, I surmise that given equally compelling opportunities, dangers and other motivations, decision makers should tend to send peacekeepers to the most serious situations where the civilian population is most at risk. According to this line of reasoning, part of what drives both the risk of mass killing and the deployment of peacekeepers can be captured using fairly simple indicators amenable to coding and inclusion in large datasets. For example, an indicator of a previous history of mass killing in a country could, all else equal, at the same time increase the propensity to send in peacekeepers and be associated with unresolved political problems and lingering hatred that are related to the risk of renewed mass killing.

It is likely, however, that much of what jointly drives mass killing and peacekeeping is very difficult to observe in such a way that indicators can be constructed for a large number of cases. If so, these subtle aspects will continue to be omitted from standard statistical analyses, while they may be influencing both the phenomenon to be explained and the explanatory factor of main interest, thereby biasing our results. Most importantly, decision makers have access to analyses from intelligence agencies, the media, non-governmental organizations and other actors with special information, of the intentions and capacities of the warring parties. I assume that this type of intangible information available to decision makers on average is more right than wrong about the risk of mass killing, and that all else equal the decision makers tend to send peacekeepers where civilians are most
at risk. In terms of the risk of mass killings, I thus assume that the peacekeepers tend to be sent to the more challenging conflicts, and that a substantial part of this varying seriousness of the situation is very difficult or impossible to account for with explanatory variables suitable for statistical analysis. Hence there are theoretical reasons for applying a statistical method that takes into account that there may be omitted factors that simultaneously influence both mass killing and peacekeeping.

Although dealing with slightly different research questions, several studies have concluded that when selection is taken into account, third parties tend to become involved in the most difficult conflicts. Using the same statistical technique as in this article—seemingly unrelated bivariate probit—Isak Svensson (2006) finds that mediators tend to be active in the conflicts where the prospects of successful mediation are the worst, and that mediation does increase the chance that intrastate conflicts end through negotiated agreements. Comparable results have also been obtained in some studies that use related but different statistical techniques. Karl DeRouen (2003) uses two-stage Heckman regression to examine the effectiveness of UN involvement in interstate disputes, and finds that the UN tends to select itself into the most difficult disputes, and that the effects of UN involvement are benign. Fortna (2008) develops estimates of the risk of renewed warfare derived from civil wars before the end of the Cold War, when peacekeeping in civil conflicts was rare, and applies these difficulty indicators to a study of which post-Cold War civil conflicts did see peacekeepers deployed following a break in the fighting. She finds that peacekeepers are sent to the most fragile peace spells, and that they increase the chances that the peace will hold.

**How Can Peacekeeping Prevent Mass Murder?**

Prominent analyses of genocides and mass killing hold that powerful military interventions that directly confront perpetrators are most likely to succeed in stopping or limiting these atrocities (e.g. Krain, 2005; Power, 2002; Valentino, 2004). This raises serious questions about whether most peacekeeping missions can be expected to have any benign effect on mass killing, since peacekeeping missions typically are militarily weak and have limited mandates. It is important, however, to distinguish between the ability of peacekeeping missions to prevent potential mass murderers from actually resorting to a strategy of mass killing, on the one hand, and the capacity of peacekeepers to stop ongoing massacres, on the other. In the latter case, the perpetrators have already crossed the Rubicon in the sense that they have committed an enormous crime that is more or less certain to have provoked strong reprehension and desire for vengeance. Actual perpetrators must clearly be extremely resolved or desperate. Those perpetrators, especially, who persist in killing huge numbers of civilians are by then likely to have largely dismissed the relevance of potential or actual countermeasures by outside actors (cf. Harff, 1986: 168). When thinking about the potential for prevention of the onset of mass killings, in the first place, we would risk being misled by a biased selection of observations if we were to base our inferences on the study of the most extreme cases only, where the perpetrators may seem to be indifferent to reactions to their deeds. Thus, whereas the only way of stopping the genocidaires of Rwanda in 1994 may in fact have been to militarily defeat them, which is what the Rwandan Patriotic Front ultimately did, it might be that other conflict actors are more susceptible to the influence of peacekeeping.
Keeping in mind, then, that prevention of the onset of mass killing may be quite different from stopping already ongoing mass killings, a study by Matthew Krain (2005) nevertheless offers several mechanisms through which peacekeepers could conceivably influence potential mass killers in a situation of armed conflict. Krain examines third-party military interventions in already ongoing state-sponsored mass murder, and is thus concerned with the conditions under which ongoing mass killings can be halted or minimized. Empirically there is some limited overlap between the military interventions that enter Krain’s study and the peacekeeping missions that constitute the key explanatory factor in this article (among others the following instances of deployed peacekeeping missions are included in both studies: Bosnia-Herzegovina 1992–1995, Rwanda 1994–1995, Angola 1988–1994). Krain finds that interventions that directly challenge the perpetrator or aid the victims are the only effective type of military responses. But given the differences between prevention by peacekeepers and military intervention in already ongoing mass killings, the other mechanisms identified by Krain could well be just as relevant in this study.

The first mechanism noted by Krain is the Challenging Intervention Model, according to which the third-party directly challenges the perpetrators and forces them to reassess the costs and benefits of resorting to mass killings. Krain contrasts the Challenging Intervention Model to the Impartial Intervention Model. According to this alternative logic, the type of intervention that is most likely to succeed is impartial and non-threatening: “If the intervening force can make it clear that stopping the killing, rather than victory for either side in the conflict, is the primary concern, then the assumption is that an impartial intervention should reduce the severity of state-sponsored mass murder” (Krain, 2005: 367). Krain labels this model the Effective Impartial Intervention Model. A third relevant model is the Witness Model, according to which the mere fact of intervention into the conflict situation with personnel on the ground is supposed to signal “at the very least an interest in the situation by the international community, and an unwillingness to be complicit by remaining passively on the sidelines” (p. 368). In this connection, Krain also stresses that the intervening third parties become potential eyewitnesses to the killings. While peacekeeping missions are unlikely to exert much influence through the Challenging Intervention Model, both the Impartial and Witness Models would apply to peacekeeping. Without going deeper into these arguments, the discussion above provides a rationale for expecting that there may be a causal effect from peacekeeping to a reduced risk of onset of mass killings in intrastate conflicts.

**Control Variables**

For the purpose of this study I want to take into account important control variables that conceivably may influence both the propensity to deploy a peacekeeping mission to a country in conflict and the risk that massacres of civilians will commence. I have reviewed the literature on the determinants of peacekeeping missions as well as the literature on the causes of mass murder. In what follows I present the explanatory factors that, based on my reading of previous research, appear to be the most appropriate candidates for this set of controls.
The most important cause of mass murder identified in previous research is major societal upheaval or state failure, particularly in the form of civil war (Gurr, 1986, 1988; Poe and Tate, 1994; Davenport, 1995, 1999; Krain, 2005). There are few if any clear-cut cases of mass killings happening outside the context of recent or ongoing societal upheaval. In this study the unit of analysis is the country-in-intrastate-armed-conflict-year, and in this sense all observations are experiencing societal upheaval.

The first joint control that I propose may affect both peacekeeping and the onset of mass murder is the history of previous episodes of such massacres. Harff (2003) reports that a history of mass killings increases the present risk that a new episode will commence. I use a slightly more fine-grained measure that for each observation notes the number of previous episodes of mass killings in the same country that are recorded in the data. I expect that the number of previous episodes of mass killings may be associated both with the onset of mass killings and with the presence of peacekeepers if indeed peacekeeping missions are sent to the most threatening situations.

The second such control that I have identified is the level of democracy in the country in conflict. Helen Fein (1995) found that regimes that are neither full democracies nor massively authoritarian are the most likely perpetrators of mass killings. The level of democracy may also be an important determinant of peacekeeping. Andreas Andersson (2000) holds that as far as UN-authorized peacekeeping missions are concerned, the Security Council is guided by a desire to promote democracy in targeted states. This suggests that peacekeeping missions may be more likely to be sent to countries that are balancing between democracy and authoritarianism, where the mission could make the greatest difference in this regard. I will include the level of democracy as a control in my joint models, and I will take into account the possibility that the relationships between democracy and peacekeeping, and between democracy and mass murder, may be curvilinear.

Relatedly, when the political institutions of a state in intrastate conflict are in flux, owing to a lengthy transition from one system to another, or have collapsed altogether, societal upheaval should be amplified. At the same time such periods would provide windows of opportunity for peace operations to influence the type of regime that will eventually result. For these reasons, an indicator for regime transition or collapse will be the third joint control variable.

In addition to these potential joint determinants of peacekeeping and mass killings, I will introduce four control variables that I expect to be related to (at least one of) the controls discussed above as well as to the risk of massacres or the presence of peacekeepers. The first such additional control variable is the intensity of fighting, indicated by a dummy variable taken from the Uppsala Conflict Data Program/PRIO, indicating for each country whether a full-scale civil war was ongoing or not in a given year (Gleditsch et al., 2002). The definition of civil war is that the conflict in question claimed at least one thousand battle-related deaths within the calendar year. The rationale for including this control is that conflict actors may be more likely to resort to mass killings the more threatened they perceive themselves to be, and the higher the value of the disputed stakes. The intensity of fighting should proxy for these aspects, and consequently I expect that mass killings should be more likely in civil war cases than in less intense conflicts.
At the same time numerous studies have found a curvilinear relationship in the form of an inverted “U” between the level of institutional democracy and the risk of civil war (Benson and Kugler, 1998; Elbadawi and Sambanis, 2002; Ellingsen and Gleditsch, 1997; Ellingsen, 2000; Hegre et al., 2001; Muller and Weede, 1990). This control variable will be included in the equation predicting the onset of mass killings in the joint model.

The second additional control is the time period to which an observation belongs. Mark J. Mullenbach (2005) examines (among several explanatory factors) the influence on peacekeeping of the norm of non-intervention that supposedly was particularly strong during the Cold War and then subsided in strength to be superseded by a norm of humanitarian intervention following the end of the Cold War. He finds mixed support for the hypothesis that the establishment of a third-party peacekeeping mission was less likely during the Cold War. It is also the case that a wave of democratization followed the end of the Cold War. Against this background I will include a dummy variable indicating the post-Cold War period(1990–2004) in the peacekeeping equation.

It has been argued that the size of the population of a country is related to democracy, so that higher levels of democracy are more likely in countries with smaller populations (Diamond and Tsalik, 1999; Hadenius, 1992: 122–125). At the same time, large countries have been found to be less likely to host peacekeeping missions (Gilligan and Stedman, 2003; Fortna, 2004; Mullenbach, 2005). The natural log of the total population will therefore be included in the peacekeeping equation.

The last control variable is the geographical region in which a country is located. When the deployment of peacekeeping missions is concerned, various forms of regional bias have been suspected and identified in policy debates and scholarly studies. For example, Gilligan and Stedman (2003) find that Asian countries are much less likely to host UN peacekeepers than countries in Latin America and the Caribbean. Democracy is also regionally clustered and there are thus reasons to add regional dummies to the peacekeeping equation. I will consequently add different combinations of regional dummy variables to the peacekeeping equation. As part of robustness tests reported separately, I also add, one at a time, period, population size and region to the mass killings equation, and intensity of fighting to the peacekeeping equation.

Data

This study aims to examine how peacekeeping influences the risk of mass killings, and the main dependent variable is the onset of mass killings. The most widely used data on mass murder is undoubtedly the data on genocides and politicides compiled by the Political Instability Task Force (formerly the State Failure Task Force), and most prominently presented by the principal investigator, Barbara Harff (2003). The dataset now covers 1955–2004 and includes “massacres, unrestrained bombing and shelling of civilian-inhabited areas, declaration of free-fire zones, starvation by prolonged interdiction of food supplies, forced expulsion (‘ethnic cleansing’) accompanied by extreme privation and killings” (Marshall et al., 2001: 15). In civil conflicts, mass killings by either the government side or the rebel side are recorded, and only unarmed civilian
victims are counted, not combatants. According to these data most mass killings of civilians are perpetrated by governments, and in times of ongoing civil conflict. I will use this dataset to identify consecutive episodes of mass killings in countries in civil conflict, and the dependent variable is the onset of such an episode of mass killings. Since my research question pertains to the onset of mass killings, subsequent years during which a consecutive episode of mass killings continues in a country in civil conflict are coded as missing and thus dropped from the analysis.

This dataset yields six onsets in civil conflicts in the post-Cold War period: Angola, Bosnia-Herzegovina, Burundi, Indonesia, Rwanda and Yugoslavia. There are 30 onsets during civil conflicts in the period 1955–1989, for example, Guatemala, Nigeria, Burundi, Somalia, Sudan, Iraq, Afghanistan, Pakistan, Sri Lanka, Cambodia and Indonesia.

The main explanatory variable is peacekeeping, defined as “military and/or civilian personnel deployed by one or more third-party states, frequently but not necessarily under the auspices of a global or regional organization, into a conflict ... situation for the purpose of creating an environment conducive for negotiation between the two parties” (Mullenbach, 2005: 529). The data on peacekeeping come from the “Third Parties Interventions in Intrastate Disputes Project” run by Mark Mullenbach and William Dixon. Their dataset includes third-party activities such as upholding “law and order, monitoring or verifying ceasefire or disengagement agreements, supervising the disarmament or demobilization of combatants, and protecting humanitarian assistance” (2005: 529). The dataset does not include war-fighting enforcement missions such as the UN forces in Korea in the 1950s.

The unit of analysis is, as previously noted, the country-in-intrastate-conflict-year. The data on intrastate conflict come from the “Third Parties Interventions in Intrastate Disputes Project” mentioned above. This dataset records 59 country-years with peacekeepers deployed in active intrastate conflict during the Cold War period 1947–1989. During the post-Cold War era (1990–2004) the corresponding number is 144 country-years.

The first control is a count variable indicating the number of previous episodes of mass killings recorded in the data compiled by the Political Instability Task Force. A new episode is coded at every onset, that is, when any level of genocide/politicide is coded in a year immediately preceded by a year without any genocide/politicide. One country, Burundi, experienced five different onsets of mass murder, two countries suffered four episodes (Indonesia and Iraq) and six countries had two episodes (Angola, China, Congo [Kinshasa], Iran, Rwanda and Sudan). Peacekeeping missions were deployed at some point in time to six out of these troubled nine countries.

In order to control for the level of democracy, I will use the well-known Polity index. More specifically, I will use a variant adapted for time-series analyses called Polity2. It ranges from −10 to 10, with −10 representing the least democratic states and 10 representing states with the most democratic political institutions. In Polity2, years coded −88, indicating periods of transition during which new institutions are established, are prorated across the span of the transition so as to avoid systematically losing data because of missing values. Years coded −77, indicating complete collapse of central political authority, are for the same reason recoded to a “neutral” score of 0 (Marshall and Jaggers, 2002). In order to capture a possible curvilinear effect.
of the level of democracy, the square term of this variable will also be included. The whole spectrum of the democracy scale is quite well represented among the countries included in the study, although coherent democracies are relatively rare.

In addition, I construct a dummy variable that takes the value 1 if either transition (–88) or collapse (–77) is coded in the polity data. This control will capture the specific effect of institutional fluidity that otherwise would be masked by the way Polity2 deals with these years. There are 146 years included in which a country was experiencing either polity transition or collapse.

The fifth control variable is the intensity of fighting in terms of whether or not at least 1000 battle-related casualties were inflicted in an intrastate armed conflict within a given calendar year. These data come from the Uppsala Conflict Data Project/PRIO. Less than one-third of the observations in the period 1955–2004 are years with full-scale civil war, while two-thirds of the onsets of mass killing during civil conflicts occurred in times of full-scale civil war.

The sixth control variable is simply a dummy taking the value 1 if the year is 1990 or later, and the value 0 if the year is 1955–1989. There were 973 country-years with ongoing intrastate conflict coded in the Intrastate Disputes dataset in the period 1955–1989, and 555 country-years in the period 1990–2004.

The seventh control is the natural log of the total population of the country. The data are based on the Penn World Tables 5.6, but with additional sources and imputation techniques to reduce problems with missing values (Gleditsch, 2002). The last control is the wider geographical region to which a country in intrastate armed conflict belongs. I added a number of different combinations of such regional dummy variables.

Analysis

My analysis will proceed from cross tabulation—the easiest and most intuitive method—over single-equation probit analyses, to the considerably more complex seemingly unrelated probit.

Episodes of mass killings are relatively rare even when we focus on civil conflicts only. The deployment of peacekeeping missions into still ongoing conflicts is also relatively rare. Ninety-seven percent of all our country-in-intrastate-conflict-years see neither peacekeeping nor mass killings (1301/1337, see Table 1). The cross-tabulation in Table 1 shows that the risk of mass killings appears to be somewhat

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Chi2(1) = .13, Pr = .72. Percentages in parentheses.
higher if peacekeepers are deployed in the country in question: 3.1% compared to 2.6%, but this difference is far from statistically significant. The question is whether the peacekeepers are sent to the most serious conflict situations. The most natural way of trying to take this possibility into account is to control for the “seriousness” of the situation. The following cross-tabulations illustrate this approach, using the intensity of fighting as a potential measure for part of the seriousness of a conflict situation. First we compare the risk of mass killing onset depending on whether a full-scale war was raging in the country or not (ignoring, for now, the possible influence of peacekeeping). Table 2 shows this cross-tabulation.

Table 2 shows that, as suspected, mass killings are much more likely to commence in a country with an ongoing full-scale civil war. In full-scale civil wars, the yearly risk of an onset of mass killings of civilians is 7.1%, and in the other intrastate conflict years, the corresponding risk is 1.5%. This relationship is statistically very significant (p < .005). What we want to do now is to compare the risk of mass killing onset depending on whether a full-scale war was raging in the country or not (ignoring, for now, the possible influence of peacekeeping). Table 2 shows this cross-tabulation.

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Table 3 suggests that peacekeeping appears to be especially ineffective in preventing mass killings of civilians in the most dangerous situations when

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Chi2(1) = 26.22, Pr = .000. Percentages in parentheses.

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Chi2(1) = .46 Pr = .50 
Chi2(1) = .91 Pr = .34

Percentages in parentheses.
full-scale civil war rages and when the need for protection consequently is greatest. The relative risk of onset is now almost doubled in the presence of a peacekeeping mission (10.8% compared to 6.5%). This difference is, however, not statistically significant. Thus, controlling for the level of intensity of fighting failed to reveal any preventive effect. On the contrary, it seems that when peacekeeping missions are deployed in more difficult situations they may fail even more spectacularly in protecting the civilian population. Yet, it is still possible that there are other important dimensions of the seriousness of the situation than the intensity of fighting, and that we thus far have not taken into account. The first model of Table 4 reports a (standard single-equation) probit regression with the onset of mass killings as the dependent variable, peacekeeping as the main independent variable, and controls.

Although more difficult to interpret, multivariate probit analysis is a much more powerful method than cross-tabulations for taking into account the potential effect of a number of variables. The single probit model in Table 4 shows — again — that there appears to be no association between peacekeeping and the risk of onset of mass killings. This result is obtained in the presence of the control variables, which are statistically significant and have the expected effects. The number of previous episodes of mass killings increases the risk that a new episode will commence. There is a curvilinear relationship in the shape of an inverted “U” between the level of democracy and the risk of onset, so that states with political institutions around the middle of the democracy scale are the most prone to mass killings in times of civil conflict. Also, countries in institutional transition or collapse and those in full-scale civil war are more at risk.

Even though we have so far controlled for several possible dimensions of the seriousness of the situation, peacekeeping appears to be ineffectual — or worse — when it comes to preventing mass killings of civilians in intrastate conflicts. However, it can be suspected that there are still omitted factors that influence both the propensity to deploy peacekeepers and the risk that parties to the civil conflict will resort to mass killings. If so, these perhaps subtle aspects may well be unmeasurable in the way required for us as researchers to be able to collect this information for a large number of conflicts and over time. For example, it is very reasonable to assume that the decision makers who consider whether or not peacekeepers should be deployed have access to detailed assessments (from intelligence agencies, the media, non-governmental organizations, etc.) of the intentions and capacities of the warring parties. If such information points to a heightened risk that civilians may be systematically targeted as the conflict progresses, and if this is taken by the relevant decision makers as grounds for deploying peacekeepers, our single-equation regressions may be biased.

This suspicion motivated the simultaneously estimated, seemingly unrelated, bivariate probit model of Table 4, Model 2. First we may note that rho is significant, which indicates that the residuals from the peacekeeping equation and the onset equation are correlated, meaning that there are omitted factors that influence both peacekeeping and mass killings. Moreover, rho reflects the “the correlation between the outcomes after the influence of the included factors is accounted for” (Greene, 2003: 854). The positive sign of rho tells us that the omitted factors

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single probit</td>
<td>Seemingly unrelated bivariate probit</td>
<td>Trimmed SUPB</td>
<td>SUPB Higher level of mass killings</td>
</tr>
<tr>
<td><strong>Coef.</strong></td>
<td><strong>SE</strong></td>
<td><strong>Coef.</strong></td>
<td><strong>SE</strong></td>
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<tr>
<td><strong>Onset equation</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Peacekeeping</td>
<td>0.11</td>
<td>0.29</td>
<td>-1.28</td>
</tr>
<tr>
<td>Previous mass killings</td>
<td>0.20</td>
<td>0.054</td>
<td>***</td>
</tr>
<tr>
<td>Democracy</td>
<td>-0.070</td>
<td>0.027</td>
<td>**</td>
</tr>
<tr>
<td>Democracy squared</td>
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<td>0.0042</td>
<td>§</td>
</tr>
<tr>
<td>Transition or collapse</td>
<td>0.54</td>
<td>0.28</td>
<td>(§)</td>
</tr>
<tr>
<td>Full-scale civil war</td>
<td>0.69</td>
<td>0.16</td>
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</tr>
<tr>
<td>Constant</td>
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<td>0.18</td>
<td>***</td>
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<tr>
<td><strong>Peacekeeping equation</strong></td>
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<tr>
<td>Previous mass killings</td>
<td>0.31</td>
<td>0.11</td>
<td>**</td>
</tr>
<tr>
<td>Democracy</td>
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<td>0.018</td>
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<td>Democracy squared</td>
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<td>0.0039</td>
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<td>Transition or collapse</td>
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<td>0.29</td>
<td>***</td>
</tr>
<tr>
<td>Post-Cold War</td>
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<td>0.21</td>
<td>***</td>
</tr>
<tr>
<td>Log of population</td>
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<td>***</td>
</tr>
<tr>
<td>Europe</td>
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<td>0.42</td>
<td>***</td>
</tr>
<tr>
<td>Constant</td>
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<td>0.72</td>
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</tr>
<tr>
<td><strong>Rho</strong></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>0.96</td>
<td>0.049</td>
<td>***</td>
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<tr>
<td><strong>N</strong></td>
<td>1267</td>
<td>1227</td>
<td>1337</td>
</tr>
<tr>
<td><strong>Chi-square (df)</strong></td>
<td>84.24 (6) ***</td>
<td>147.02 (13) ***</td>
<td>126.10 (2) ***</td>
</tr>
<tr>
<td><strong>Log-(pseudo-) likelihood</strong></td>
<td>-138.53</td>
<td>-403.66</td>
<td>-604.44</td>
</tr>
</tbody>
</table>

Robust standard errors adjusted for clustering.

* *** p <= .005, ** p <= .01, * p <= .05, (§) p <= .10 (two-tailed tests). § Jointly significant.
simultaneously are associated with the presence of peacekeeping and the onset of mass killings. This is exactly what the argument about decision makers selecting to intervene in the most serious conflicts leads us to expect. In other words, there seem to be omitted factors that increase both the likelihood that peacekeepers will be deployed and the risk that mass killings will commence.

The coefficient for peacekeeping now has a negative sign. This means that the presence of a peacekeeping mission turns out to be associated with a lower risk of mass killings once we take into account the likely influence of omitted factors. That is to say, considering that peacekeepers tend to be sent to situations that are the most prone to mass killings, the presence of a peacekeeping mission indeed seems to dent the atrociousness of these grim conflicts. Now the preventive effect of peacekeeping is also statistically extremely significant (p < .005). The controls of Model 2 behave as expected and are statistically very significant. Mass killings are more likely to commence the higher the number of previous such episodes that a country has suffered. Semi-democracies and countries with political institutions in transition or collapse are also more at risk, as are those countries that are ravaged by full-scale civil war.

As expected the peacekeeping equation of the bivariate probit shows that peacekeeping is more likely in countries with previous episodes of mass killings, in semi-democracies near the middle of the democracy scale, when the political institutions are in transition or collapse, in the post-Cold War period, in countries with smaller populations, and in Europe including the former Soviet Union.

Model 3 is a trimmed version that retains only peacekeeping as a predictor of the onset of mass killings, and time period as a predictor of peacekeeping. The results for the retained variables remain practically unchanged.

Model 4 uses a more restrictive definition of mass killings that does not count the lowest level of the genocide/politicide variable. All the main results of Model 2 are confirmed.

**Robustness Checks**

The results reported above are robust to a large number of robustness checks as reported below. The full results are available from the author on request. In order to control for time dependence, and following Carter and Signorino (2006), I added a count variable that indicates the number of years since the last year of genocide/politicide, this count variable squared, and the number of years cubed to the mass killings equation in Models 2 and 4.

Also, the following variables were added one at a time to the mass killings equation in Model 2: time period, population size, region, trade openness, log of GDP per capita (and the squared term of this variable), years since major change in political institutions, years since independence, duration of conflict sustaining at least 25 battle-related deaths per year (and the squared term of this variable). The following variables were added one at a time to the peacekeeping equation in Model 2: full-scale civil war, an indicator of great power status, an indicator of regional or great power status, log of GDP per capita (and the squared term of this variable), years since major change in political institutions, duration of
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Conflict sustaining at least 25 battle-related deaths per year (and the squared term of this variable).

Conclusions

In this article I have shown that peacekeeping missions seem to reduce the risk that mass killings of civilians will commence in intrastate armed conflicts. This result emerged only after the application of advanced statistical techniques that take into account that there may be unobserved omitted factors that simultaneously increase the probability that peacekeepers will be deployed and the risk that the conflict parties will resort to mass killings. At a first glance at the historical pattern, peacekeeping seemed utterly ineffective or even counterproductive as far as this important task is concerned.

I conceive of the factors that probably remain omitted from the analysis as reflecting the seriousness of the situation in terms of the presence or absence of numerous causes contributing to heightening the risk of mass killings. I assume that decision makers can observe some of these causes or early warning signs even if the scholarly community lacks systematic data that would allow the direct and explicit inclusion of these omitted factors in statistical models. I further assume that all else equal, the relevant decision makers are prone to dispatch peacekeepers to situations that are perceived to be more serious in this regard. Undoubtedly there are many other important considerations that also weigh in, but given equally compelling reasons, opportunities and dangers, I would expect that the decision makers will choose to intervene in the situations where the perceived threat to civilian life is greatest. In this sense I believe that peacekeepers may be systematically selected into the most serious situations.

My statistical findings are in agreement with this interpretation. In future research the statistical analysis needs to be extended with studies that use more fine-grained data and more refined methods. At the same time I believe that further progress in understanding this issue also requires in-depth comparative case studies that can get at the causal mechanisms in more detail. Real-world reality-checks in the form of input from experienced practitioners would also be extremely helpful. The more advanced the statistical techniques become, and the greater the gap grows between measurements and theoretical concepts, the greater is the risk that statistical analyses in isolation will come up with technical artefacts or findings that are too far removed from the practice of conflict prevention to be of any practical interest.

Given these reservations, what policy implications follow from this study beyond the admonition to provide the means for further research, preferably involving the scholarly community in cooperation with prevention practitioners? In one sense, the most important policy implication at this stage may simply be the message that at least in this important respect peacekeeping has a praiseworthy preventive effect. The increased peacekeeping activity in the post-Cold War era thus appears to be part of the explanation for why the atrociousness of civil conflict has decreased since the Cold War ended. Critics who argue that it is meaningless to try to prevent mass killings in civil conflicts through peacekeeping missions should be challenged to disprove this study or change their views. Needless to say, we would like to know
more exactly how peacekeeping missions serve to dent the risk of mass murder and the conditions for success, so that future missions can be adapted to become more efficient; these questions will have to be deferred to future research.

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