

United Nations Peacekeeping and Civilian Protection in Civil War*

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International institutions are both applauded and lambasted for their attempts to ensure human security. With the adoption of the Responsibility to Protect doctrine by the United Nations General Assembly in 2005, the international community has accepted greater responsibility for protecting civilians from atrocities. The predominant institution that seeks to ensure human security is the United Nations, and the primary tool it uses to safeguard civilians is peacekeeping. Civilian protection has been emphasized since the end of the Cold War as the core component of peacekeeping (Diehl and Druckman 2010; Wills 2009), and the UN Department of Peacekeeping acknowledges on the front page of its website that the protection of civilians is “a challenging mandate and the yardstick by which we are often judged.” But how well do peacekeepers protect civilians from violence?

Instances of mass violence on the UN’s watch, such as the 1994 genocide in Rwanda, cast doubt on the UN’s ability to protect non-combatants. However, there are more successful examples in UN history. During Sierra Leone’s civil war in the late 1990s, warring factions committed ruthless atrocities. Unable to impede the violence, the UN observer mission in Sierra Leone (UNOMSIL) recommended a stronger commitment, leading to the deployment of the more fully equipped UNAMSIL mission in 1999. While levels of violence were still high when UNAMSIL began its deployment, violence against civilians subsequently dropped and the Secretary-General delivered more positive evaluations of the situation on the ground throughout 2000 as an increasing supply of troops arrived (see United Nations 2000a; 2000b). This suggests that the UN can protect civilians if missions are sufficiently outfitted for the task.

In this paper, we systematically explore how UN peacekeeping influences the use of violence against civilians during civil wars. We argue that peacekeeping operations (PKOs) mitigate violence in two ways. First, on the battlefield, peacekeepers intercede between combatants, reducing direct hostilities and mitigating their incentives to target civilians as a

conflict strategy. Second, behind the battlefield's frontlines, peacekeepers impose physical barriers between the combatants and their potential civilian targets, making violence a less attractive way for warring factions to extract support or resources from the civilian population.

The UN's ability to execute the above functions depends upon the size and personnel composition of the force deployment. The size of the UN's commitment is critical, as an operation's ability to separate combatants and impose barriers to civilian targeting depends upon the amount of personnel deployed. As the UN's force commitment increases, so does its ability to protect civilians. Yet not all personnel have the same ability to ensure civilian security. The UN deploys multiple types of personnel to peace operations, including armed military troops, police units, and unarmed observer personnel. Military troops and police forces are more equipped than unarmed observers to obstruct violence and protect the population. Moreover, different personnel components of PKOs send different signals to the combatant factions. An escalating number of military troops and police units signals the UN's credible commitment to conflict resolution and civilian protection, because these are the only personnel that can impede violence. Unarmed observers do not send the same signal of resolve to prevent civilian killings.

Scholarly work offers divergent conclusions on the effectiveness of peacekeeping. We suspect one reason for this is that extant studies do not fully measure the UN's efforts. Previous quantitative analyses of peacekeeping effectiveness rely on blunt measures (e.g. whether a PKO is present) that do not capture nuances across and within missions. This paper uses newly collected data that more finely measure PKO force levels to capture how mission capacity changes over the course of conflicts. The data include monthly observations of the number and type of peacekeepers deployed to each mission and the number of civilian deaths committed by combatants during intrastate conflicts in Sub-Saharan Africa from 1991 to 2008.

The analyses reveal that increasing the number of UN troops and police significantly decreases violence against civilians by both governments and rebels. Peacekeeping successfully reduces civilian suffering if the UN commits larger numbers of appropriately tasked personnel to a conflict. Given that the UN tends to get involved in the more intractable conflicts (Gilligan and Stedman 2003), it is striking that peacekeeping manages to reduce civilian suffering. This speaks directly to the policy debate about whether it is useful for states to invest in UN PKOs. Skeptics may find anecdotal evidence suggesting that peacekeeping does not always achieve its goals. Our findings show that there is reason to be optimistic, as PKOs mitigate one of the most appalling aspects of civil war – the intentional killing of civilians. If the international community is serious about safeguarding human security, UN peacekeeping should be provided with the resources necessary to enable continued prevention and management of anti-civilian violence.

Accounting for Mission Size and Capacity in Assessing Effectiveness of UN Peacekeeping

There is a rigorous debate on the effectiveness of UN peacekeeping. Some studies show that the UN is ineffective in halting conflict and pursuing peace (Diehl, Reifschneider, and Hensel 1996; King and Zeng 2007), and a great deal of case study and policy work has uncovered the factors that produce peacekeeping failure (Jett 2001; Jones 2001). Yet others have discovered conditions under which peacekeeping reduces hostilities (Fortna 2008; Doyle and Sambanis 2000; Gilligan and Sergenti 2008). We suspect one reason for these divergent findings is that most studies do not capture the changing size of missions or the various types of UN personnel deployed. When accounting for PKOs, many studies simply dichotomize the presence or absence of operations in a given year, assuming the capabilities of missions do not change over time.

Such analyses come with limitations. For instance, dichotomous treatments only account for the presence of a mission. This ignores diversity across missions in terms of mandates,

personnel commitments, and force capacities. Even when studies include some quantification of UN force commitments, they often employ the conflict-year as the unit of analysis, overlooking intra-year changes in mission commitments. But peacekeeping force commitments often change over the course of a year as new UN resolutions require the escalation or withdrawal of personnel from a conflict zone. Given the voluntary nature of the contribution process and the multitude of locations from which forces are deployed, UN personnel generally do not arrive in a conflict country simultaneously. Troops arrive piecemeal, and a mission's ability to fulfill its mandated goals changes as it is progressively outfitted with its necessary components. Similarly, the withdrawal of troops is often more graduated than instantaneous. PKOs may be hamstrung by attrition, as contributor countries remove troops on their own accord. As a result, the amount of personnel deployed to a mission can vary widely within a given year.

Consider Figure 1a, which plots the total UN force commitments to operations in Somalia (UNOSOM I & II). The standard conflict-year dichotomization of PKOs only indicates that a mission was present in each of the years plotted: 1993, 1994, and 1995. However, the capacity of the missions changes greatly over this period. In 1993 alone, the number of personnel rose from under 700 in January to over 29,000 in November. A similarly remarkable decline occurred over the subsequent fourteen months, until the operation entirely disengaged in February 1995. If the physical capacity of a mission affects its ability to fulfill its goals, the standard conflict-year unit of analysis is too blunt an instrument by which to judge the effect of peacekeeping.

<FIGURE 1 ABOUT HERE>

Furthermore, as Figures 1b through 1e indicate, different operations are variously constituted, and their personnel components change in important ways within given years. Figure 1b plots the total personnel committed to Mozambique (ONUMOZ), Angola (UNAVEM), and Burundi (ONUB) for a single year. Judging the force commitments at the yearly level produces

substantially different measures depending on the point at which the measurement was taken. An assessment of force levels in March represents three distinct operation sizes, whereas a measurement in October indicates great similarity. Further, while much of the peacekeeping discourse focuses on troop deployments, military troops are only one component of operations. As noted in Figure 1b, the total amount of personnel committed to ONUMOZ and ONUB is similar in the later months. This masks the distinct compositions of these missions, shown in Figures 1c - e. ONUMOZ notably decreases its military troop level over the latter course of the year while radically increasing its police force. By comparison, ONUB maintains a stable deployment of troops and police. Also, the number of observers available to both missions is distinct and only converges in the final month. While the total personnel commitment to ONUMOZ and ONUB appears similar in Figure 1b, the components differ from each other and change substantially within a calendar year.

These figures make clear that peacekeeping is not the discrete treatment that empirical models often assume. PKOs are outfitted with various force capacities, and the capabilities and composition of missions sometimes change drastically over short periods of time. It is important to account for these differences if the various components of PKOs have distinct consequences for peacekeeping effectiveness.

United Nations Peacekeeping and Civilian Protection

Preventing civilian victimization has been a central matter for peacekeepers since the beginning of UN operations. Former Secretary-General Dag Hammarskjöld argued that the UN could never justify being bystanders to serious atrocities, even if mandates only allowed force in self-defense (Wills 2009: 267-72). While previous studies explore how third party intervention influences violence against civilians (Krain 2005; Kathman and Wood 2011; Wood, Kathman, and Gent

2012; Hultman 2010; Melander 2009), no study systematically examines UN peacekeeping as a mechanism for reducing victimization. It is surprising that while preventing civilian deaths is a primary motivation behind UN peacekeeping, we know little about its ability to do so.

We propose that PKOs protect civilian populations from violence by (a) separating combatants and reducing battlefield activities that trigger civilian targeting, and (b) policing, monitoring, patrolling, and enforcing civilian protection behind the battle lines. If civilians are ‘soft’ targets of opportunity for augmenting a faction’s relative capabilities or garnering support from the population, PKOs make it more costly for combatants to exploit these opportunities. The ability to interfere with battlefield confrontations and create physical barriers to victimization behind the frontlines is crucial to mission effectiveness. Achieving these goals is dependent upon a mission’s physical capacity and the signal of resolve sent by the UN to the combatant parties. As the number of personnel deployed for these tasks increases, so too does the capacity of a mission to decrease violence and signal the UN’s resolve for opposing victimization.

The Capacity to Protect Civilians: Importance of Mission Size

The capacity of the UN to protect civilians depends on the number of peacekeepers it commits to a conflict. Previous studies argue that boots on the ground are important for the success of a mission (Kreps 2010; Ruggeri et. al 2013) and for civilian protection (Evans 2008:124). A large deployment enables peacekeeping units to operate where needed. Even when a PKO mandate from the Security Council specifies protection of civilians as a main task, it is often followed by a caveat such as “within capabilities and areas of operation...” (Holt, Taylor, and Kelly 2009: 36). Commonly, stronger mandates are closely linked to the size of the peacekeeping contingent that the UN deploys. For instance, Security Council resolutions approving stronger mandates for

its mission to protect civilians in the Congo are accompanied by an increase in the amount of troops devoted to MONUC (Holt, Taylor, and Kelly 2009:285). Similarly, UN Security Council Resolution 1923 links conditions for the drawdown of MINURCAT troops to meeting certain benchmarks for civilian protection (United Nations Security Council 2010). It seems the UN believes that a large contingent of peacekeepers is required for civilian protection.

Greater numbers of troops also signal the UN's resolve to stop violence. A third party's ability to signal its commitment to an intervention is vital for conflict resolution. Even if factions wish to end a conflict, the security dilemma encourages them to continue fighting out of fear that the adversary will exploit them if they disarm. Often the security dilemma is only overcome when a third party is willing to enforce demobilization (Walter 2002). It can be difficult for third parties to credibly signal their resolve prior to intervention, but these signals influence combatants' decisions to continue fighting and, in turn, mistreating the population (Thyne 2006, 2009). Large UN missions send stronger signals of resolve because they are politically visible to domestic and international audiences, making contributor states and Security Council members more accountable for peacekeeping effectiveness. Large deployments are also more difficult to remove from a conflict without political costs. Thus, increasing mission size improves operational capacity and strengthens the UN's signal that it is committed to stopping violence.

Mechanism of Civilian Protection: Separating Combatants with UN Military Troops

In addition to their overall size, PKOs are outfitted with different personnel types that have particular tools to protect civilians. Operations that physically separate factions reduce the immediate incentives for civilian victimization. This is a crucial aspect of reducing violence against civilians that results from fighting on the battlefield. The ability to control territory and obtain the loyalty of civilians is critical to the combatants' success in conflict (Kalyvas 1999,

2006; Kalyvas and Kocher 2007). Garnering the population's loyalty allows a combatant faction to obtain information about the adversary, acquire food, shelter, and arms, and recruit from a pool of potential soldiers, all of which can be used to improve its relative power (Wood 2010; Wood, Kathman, and Gent 2012). Along the battlefield's frontlines, where control of territory is directly contested, combatants use violence to cow the population, deter civilian defection, and secure civilian support. A faction may also target civilians to make it more difficult for the opponent to operate in contested regions (Valentino, Huth, and Balch-Lindsay 2004; Azam and Hoeffler 2002), or to coerce the opponent into concessions (e.g. Balcells 2011). The motivation for such violence is especially strong when combatants face strategic setbacks on the battlefield (Downes 2008; Hultman 2007), as the combatants look to augment their capabilities following battlefield losses.

Mitigating violence on the battlefield is thus important to protecting civilians in contested regions. Of the personnel types committed by the UN to its missions, only armed military troops create buffer zones and oversee ceasefires to impede confrontation between the combatants (Doyle and Sambanis 2000; Fortna 2008; Walter 2002). The opportunity to target civilians in contested areas is strongly reduced by the presence of interceding military troops. Imposing troops divides the parties, reduces battlefield hostilities, and removes incentives to coerce civilian loyalty or weaken civilian support for the opposing side (Doyle and Sambanis 2006: 55).

The UN also reduces the combatants' ability to target civilians by disarming the fighters. Among the main tasks of UN military troops are maintaining ceasefires and disarming factions, which provides security to combatants and reduces the need to improve their security through violence. For example, Security Council resolution 1270 specifically directs UN troops in Sierra Leone to use various disarmament techniques to reduce the combatants' ability to inflict harm upon the civilian population. Correspondingly, the resolution also calls on UNAMSIL to "afford

protection to civilians under imminent threat of violence.” Disarmament alleviates the security dilemma that so often plagues civil wars (Walter 1997, 2002). Even in the wake of a settlement, factions remain uncertain about the actions and intentions of their opponents, intensifying their sense of insecurity. The disarmament processes enforced by UN troops reduces both the capacity of factions to commit violence and their motivation for coercing civilian support.

Importantly, the armed and capable nature of military troops signals strong commitment to civilian protection. The UN’s commitment is more credibly signaled as the number of troops deployed to the conflict zone increases. As more military troops arrive, the capacity of a mission and its signal of commitment to civilian protection reduce the incentives and opportunities for belligerents to use the battlefield for military gain. In turn, combatants have less need to target civilians to offset losses on the battlefield. Teaming our argument on the size of peacekeeping missions with the role of UN military troops yields the following hypothesis:

Hypothesis 1: As the UN commits more military troops to a conflict, the amount of violence committed against civilians decreases.

Mechanism of Civilian Protection: Patrolling the Population with UN Police

Another mechanism by which UN PKOs can prevent civilian deaths is through police protection. If belligerents are effectively separated, the battlefield offers fewer opportunities for factions to confront one another directly in contested areas. Yet factions may attempt to improve their position behind the frontlines by clearing political opponents from strategically important rear bases (Balcells 2010) and restocking their ranks through forced recruitment (Gates and Reich 2006). Furthermore, indiscipline and violent looting raids in regions outside the conflict zone often result in atrocities (Humphreys and Weinstein 2006; Azam 2006). By policing areas behind the battle lines, peacekeepers enforce the protection of vulnerable populations and increase the cost of violence to combatants. Patrolling and enforcing nonviolent behavior behind the

frontlines reduces the belligerents' strategic incentives to abuse the population in an effort to consolidate control over their respective territories and makes victimization a more costly option for extracting resources from civilians.

Among the various UN personnel types, armed police units are best suited to the task. Police counter the actions of predatory soldiers who have incentives to terrorize the population for personal gain. Factions that have lost governing control over their armed forces are less able to sanction renegade soldiers (Weinstein 2007; Humphrey and Weinstein 2006). Police units render renegade rebel or government soldiers less capable of violence, plunder, or other rapacious behaviors. UN police are often tasked with patrolling population centers, gathering information, escorting humanitarian aid, and providing security to internally displaced people (Holt, Taylor, and Kelly 2009: 166). In this sense, police forces act as physical barriers, increasing the costs to the combatants for victimizing civilians behind the frontlines.

As an example, the UNAMID mission in Darfur deployed police to protect women leaving internally displaced people (IDP) camps to collect firewood (Holt, Taylor, and Kelly 2009: 207). UNAMID is credited with protecting civilians outside its compound during a government assault on Muhajiriya in 2009, staving off attacks that "could have cost many more civilian lives" (Holt, Taylor, and Kelly 2009:358). Additionally, UN police have worked alongside national police, the UN Development program, and local authorities to maintain law and order in refugee camps. One task of this combined effort included installing lights and cameras to monitor and observe the security of the camps, improving the effectiveness of UN police to secure noncombatant protections (United Nations Security Council 2010).

Again, the capacity and the credibility of the UN's commitment to protecting civilians increase as the number of police personnel deployed by the UN rises. As the number of police units increases, the UN transmits a stronger signal of its commitment to reducing lawlessness

and violence. Moreover, police units are often responsible for training and outfitting newly constituted local police forces. Their activities yield a force multiplier effect as they strengthen the development of indigenous police forces. Increasing the number of UN police enhances this force multiplier effect. Such an integrated approach of policing, or “policekeeping,” is a valuable instrument for protecting civilians (Day and Freeman 2005). This leads to our second hypothesis:

Hypothesis 2: As the UN commits more police personnel to a conflict, the amount of violence committed against civilians decreases.

Other Peacekeeping Functions: Monitoring Conflict Processes with UN Observers

While a mission’s capacity and the credibility of its commitment improve as armed troops and police forces are increasingly deployed to a conflict, the same effect cannot be attributed to the UN’s third major PKO personnel type: unarmed observers. Observers have neither the capability nor the mandate to use force in protecting civilians. Their role is to report to a global audience on atrocities committed by combatants. The capacity of the UN to serve this role increases as observer personnel are deployed in larger numbers. However, observers should not be expected to have the same effect as military troops and police on the belligerents’ use of violence against civilians. They do not have the capability to physically block civilian killing, nor do they signal an intention by the UN to protect noncombatant populations. We therefore do not have a strong theoretically motivated expectation about the effect of increasing observers on civilian violence.

However, we can speculate on the effect that observers might have. If factions rightfully perceive observers as the weakest form of PKO commitment, the provision of observers alone signals that the UN lacks the resolve to protect civilians. In this sense, the allocation of observers is a low-risk option for the UN, as observers are meant to avoid involvement in the violent processes addressed by other personnel types. Combatants know this. They may thus interpret the dispatching of observer personnel as a signal of the UN’s weak resolve for bearing the cost of

civilian protection, yielding no inhibition in their use of anti-civilian violence. This implies a null effect of observers.

Alternatively, there is reason to believe UN observers might actually be associated with an increase in civilian killings. Existing research suggests civilians are emboldened by the presence of observers, incorrectly assuming observers will provide security when such provisions fall outside their capability and mandate. This may cause civilians to venture out and become easier targets for predatory government or rebel soldiers (Kreps and Wallace 2011). Moreover, by deploying an increasingly large number of observers, the international community signals its expectation that there are worrisome activities on which to report. Given the UN's humanitarian motivations, combatants should expect observer personnel to be followed by a more capable mission to halt anti-civilian violence. If a stronger mission constituted of military troops and police units is in the offing, the factions have an immediate incentive to improve their relative power out of fear that the status quo power balance will soon be solidified. Combatants may immediately turn to victimization to secure civilian loyalty, deter civilian defection, restock their fighting ranks, and acquire more resources. Doing so improves a faction's power status and bargaining leverage in any future peace brokered by the arrival of a capable UN mission. These dynamics suggest a positive relationship between UN observers and civilian killings.

Finally, the observer capacity of a PKO may reduce incentives by both insurgents and governments to use violence. Combatants who seek legitimacy in the eyes of the international community will be discredited as legitimate actors if the UN observes and publicizes atrocities. As the number of observer personnel on the ground increases, so too does their ability to report atrocious behavior, rendering belligerents more reluctant to target non-combatants. Yet, given their weak capacity and signal of resolve, we do not have a strong expectation of how increasing UN observers influences the ability and motivations of belligerents to kill civilians.

Research Design

One way we might gauge the influence of UN personnel on civilian victimization is through bivariate analysis – that is, by simply observing what happens to the level of civilian deaths when various types and amounts of UN personnel are introduced. For instance, graphs of violence against civilians during conflicts in Angola and the Central African Republic illustrate the dynamics of violence and UN protection.

<FIGURES 2 and 3 ABOUT HERE>

In both cases, we observe varying but high amounts of anti-civilian violence when UN personnel are deployed at low levels or are absent. Violence continues initially when UN personnel are deployed, but declines in both Angola and the Central African Republic after the UN serves for some time. Violence then drops to low levels or ceases when the amount of UN personnel reaches increasingly high levels observed in each mission. In Angola, after personnel are drawn down, violence reemerges and escalates. Violence ceases in the Central African Republic as the UN police commitment remains and is enhanced. Both of these graphs indicate that increasing amounts of UN police and troops are associated with low or no violence against civilians, which is evidence in support of our hypotheses.¹

The limitation of such bivariate illustrations is that they do not control for various factors unique to each conflict. For instance, the UN's ability to curb violence against civilians may be hindered by the amount of fighting on the battlefield. If battlefield deaths are not controlled for, inferences about the influence of the UN on civilian deaths may be spurious. To draw solid conclusions about the effect of UN peacekeeping levels, it is necessary to control for various

¹ Additional graphs of this type can be found in the online Supporting Information (SI) document.

contextual factors influencing civilian victimization. We therefore turn to multivariate analyses of all three UN personnel types on violence against civilians.

To gauge the effectiveness of peacekeeping, we explore all intrastate armed conflicts in Sub-Saharan Africa from 1991 to 2008 with monthly observations. Conflicts are identified using the Uppsala Conflict Data Program/Peace Research Institute, Oslo (UCDP/PRIO) Armed Conflict Dataset v.4-2010 (Harbom and Wallensteen, 2009; Gleditsch, et al. 2002), which employs a threshold of 25 battle-deaths per year. The dataset covers 36 conflicts, twelve of which have a PKO present at some time. Consistent with previous research, we add two years of observations to the end of each conflict episode, as the theoretical processes associated with victimization may continue after the cessation of hostilities (Cunningham et al. 2009).

Dependent Variable

We use three dependent variables that code the number of civilians killed in a conflict month by (a) any combatant faction, (b) rebel groups, and (c) government forces. Victimization in civil war is a dynamic process. Historical records for individual conflicts indicate that the belligerents respond quickly to changing conflict dynamics. The subsequent victimization that results from these changes follows in short order, requiring finer data than is available in conflict-year analyses. The monthly data used here account for processes unaddressed in previous models, providing a richer exploration of peacekeeping.² Data on civilian killings are derived from the UCDP's Geocoded Events Dataset Beta_101220_v2 (Sundberg et al. 2010; Melander and Sundberg 2011), which includes data on one-sided violence (see Eck and Hultman 2007). The

² For a full description of the data, descriptive statistics, and discussion of our spatio-temporal domain, see the online SI document.

one-sided violence data counts only purposeful killings by combatants and does not include other types of violence such as accidental civilian deaths. We can thus be confident that our findings reflect the influence of peacekeeping on direct targeting of civilians, rather than spurious effects associated with random elements of war.

Primary Independent Variables

We generate three independent variables that code the number and type of peacekeeping personnel committed to a country in conflict during a given month (Kathman 2013). *UN Military Troops* captures the number of armed troops deployed, and *UN Police* measures the number of police forces sent. We also include a count of *UN Observers*. To ensure temporal order, we lag each personnel count one month.

Control Variables

Prior work shows that civilian killing in one period is dependent on the dynamics that allowed for killing in the previous period (Eck and Hultman 2007). We include *All One-Sided Violence_(t-1)*, *Rebel One-Sided Violence_(t-1)*, and *Government One-Sided Violence_(t-1)* to correspond to their respective dependent variables. These variables should exhibit a positive relationship with civilian killing.³ We also expect that as battlefield violence increases, hostilities spill over into

³ While lagged dependent variables are often used to account for temporal dependence, we use simple dummy indicators to note whether violence was committed (1) or not (0) in the previous month for these three variables in their respective models. Violence is often committed in spurts, and thus continuous lagged dependent variables are not consistently associated with variation on the dependent variable. By dichotomizing these variables, we can determine whether the use of violence at time t-1 affects the magnitude of violence at time t. This is similar to accounting for a

the population (Hultman 2007; Downes 2008). We consequently control for *All Battle Deaths*, *Rebel Battle Deaths*, and *Government Battle Deaths*, the monthly number of battlefield deaths incurred by all factions, rebels, and regime forces, respectively. We control for the source of conflict between the government and rebels to determine if it is significantly related to the targeting of noncombatants. *Government Conflict* is a dichotomous variable that uses the UCDP/PRIO delineation of civil wars fought over territorial (0) or government (1) control. We also expect longer wars to offer greater incentives for factions to victimize civilians. As a war wears on and neither belligerent is able to subjugate the other, factions may turn to victimization to tip the balance. *Conflict Duration* is the number of months since the beginning of a conflict episode. Finally, a larger population offers greater opportunities for civilian mistreatment. We include *Population* to record each war country's yearly population size according to Composite Index of National Material Capabilities data (Singer, Bremer and Stuckey 1972).

Model

Given that the dependent variable is a count of events, we utilize a count model to estimate the influence of covariates on civilian deaths, as linear regression often produces inefficient, inconsistent, and biased estimates of counts (Long 1997). We use a negative binomial model to account for possible heterogeneity and contagion in these data. Unobserved factors may induce heterogeneity, where different wars with similar values of the independent variables have different values of the error term. Contagion may occur when a country's level of civilian deaths

psychological threshold that combatants cross to engage in killing, which should subsequently have an effect on the magnitude of their killings. Still, the results for our three primary variables of interest do not change substantially by controlling for the lagged dependent variable as counts.

increases once civilian deaths begin, due to unobserved factors such as heightening resolve of the combatants. The negative binomial model estimates unobserved heterogeneity and contagion with a unique dispersion parameter (Long 1997).

Results and Analysis

Table 1 reports the results of our statistical analyses of UN peacekeeping commitments on one-sided violence (OSV). The first model in Table 1 uses a dependent variable that combines the number of civilians killed by rebel and government forces in each war month to give a sense of peacekeeping's overall effect on anti-civilian violence in civil war. Models 2 and 3 disaggregate violence by combatant to determine if peacekeeping influences victimization by rebels differently from victimization by government forces.⁴ Due to potential correlation between observations within the same war, we report robust standard errors clustered on the conflict observed.

<TABLE 1 ABOUT HERE>

The peacekeeping variables in Table 1 indicate support for hypotheses 1 and 2. The negative and statistically significant ($p < .001$) effects of *UN Military Troops* and *UN Police* suggest that as PKOs are increasingly supplied with soldiers and police forces, violence against civilians in civil war decreases. Irrespective of the belligerents' different motivations to target civilians, escalating the number of troops and police reduces violence against noncombatants.

To better characterize the effect of *UN Military Troops* on the number of civilian deaths, the descending curve in Figure 4 shows the estimated relationship between these variables as

⁴ Given the aggregate nature of the dependent variable in model 1, the control variables for the temporal lag of the dependent variable and the number of battle-related fatalities are also aggregated. These controls are then disaggregated for the analyses reported in models 2 and 3.

derived from model 1 of Table 1 using Clarify (King, Tomz, and Wittenberg 2002).⁵ For reference, the figure also includes a histogram indicating the percentage of observations that fall within specific categories across the range of *UN Military Troops*. The figure shows that increasing the number of troops has a dramatic effect on improving the safety of noncombatants. With no troops deployed to a conflict, the expected number of civilians killed in a given month is approximately 106. When the number of UN military troops increases to 8,000, the expected value of civilian deaths declines to 1.79. Conditional on the other variables being held at the specified values, supplying only several thousand military troops nearly mutes violence completely as the number of troops approaches the upper values reported.

Figure 5 presents a similarly strong decline in the expected value of civilian deaths as UN police forces committed to a civil war increase. Again, the figure includes a histogram of the percentage of observations that fall within categories across the range of *UN Police*. With no UN police on the ground, the expected value of civilian deaths in a given month is 96. As the graph indicates, conditional upon the other variables being held at the specified values, 200 police reduce the expected number of civilians killed dramatically, from about 96 to fewer than 14, and the presence of 500 police nearly eliminates civilian deaths. Bear in mind that the values presented are expected civilian deaths *per month*. These are not inconsequential reductions in violence. Indeed, given that the average length of a conflict in these data is nearly 65 months, deploying highly equipped missions can mitigate or wholly avert humanitarian disasters.

<FIGURES 4 and 5 ABOUT HERE>

⁵ For Figures 4 and 5, the predictions represent a situation in which continuous variables are held at their means, the war was fought over government control, and violence against civilians had been committed in the previous month.

While we find that military troops and police reduce civilian killings, the coefficient for *UN Observers* points in the opposite direction, indicating that greater observer deployments exacerbate victimization. The presence of observers improves the UN's ability to observe war processes. We might expect that factions wanting a legitimate role in post-conflict governance would avoid atrocious behavior. However, observers are the most weakly mandated of the three types. They have no physical capacity to respond to violence, so they may signal that the international community is only marginally committed to resolving the war. Furthermore, the arrival of large numbers of observers may indicate to belligerents that a robust peacekeeping mission is likely to arrive in the future – a mission that could then separate the combatants and solidify the status quo on the battlefield. Combatants therefore have a present-day incentive to improve their relative standing against their adversary. Observer personnel may thus have the perverse effect of sparking an immediate escalation of one-sided violence as factions attempt to improve their control over the population, acquire resources, and augment their relative power.⁶

Analyses of peacekeeping may be confounded by endogeneity. If, by some mechanism, the UN chooses to intervene in wars for which it expects a decline in civilian killing, the effect of peacekeeping may be spuriously related to civilian violence. However, on balance, the UN tends to intervene in more difficult cases. Recent research has found that the UN is more likely to send missions to civil wars as casualties increase (Gilligan and Stedman 2003), in particular civilian casualties (Hultman 2013), and where the rebels are militarily strong (Fortna 2008). Even so, we check the robustness of our results in a number of ways. First, we reanalyze model 1 on a dataset that only includes observations for which a PKO was present. The results are reported in model

⁶ In addition to the models reported herein, the online SI document notes the findings from a number of robustness checks of these results.

4. Even when comparing amongst PKOs, as the number of troops and police deployed to the operation increases, civilian killing significantly decreases. Yet, as the number of observers increases, more civilians are targeted by the factions.⁷

Second, we follow the example of Gilligan and Sergenti (2008) by using a multivariate propensity score matching method to create matched datasets on which we reanalyzed the effect of our variables. Using Sekhon's (2011) genetic matching technique, we create matched datasets where every observation for which a peacekeeping mission was present was matched with an observation for which no such mission was committed to the conflict. In essence, the matching technique pairs cases of UN intervention (the treatment) with other (untreated) cases of civil war that did not experience peacekeeping but were similar on the observed values of the other covariates. Matching allows us to use quantitative methods to compare like cases, giving our analyses further traction by permitting us to more closely assign variation on the dependent variable to our peacekeeping variables.⁸ Upon generating the matched dataset, we reanalyze

⁷ Models 2 and 3 were reanalyzed in this way, and the results were consistent. Also, an additional analysis was conducted and is reported in the online SI document. This analysis included only wars that received a PKO at some point. For this subset of wars, all war months were analyzed. Thus, the analysis was not restricted only to observations in which a PKO was present, as in model 4. All wars that never experienced a PKO were dropped. Again, the results were consistent.

⁸ The process of matching requires one to dichotomize the treatment variable in order to pair it with a similar case. Therefore, we created a dummy variable to represent the presence/absence of any peacekeeping mission in each conflict month observation. This allowed us to match those observations in which a PKO was present (1) with a similar observation for which a PKO was

model 1, including the number of troops, police, and observer personnel deployed and including all of our controls to account for any residual variation that remains after matching. The results are consistent with those reported here. In other words, even after matching civil war observations with PKOs present to similar civil war observations without peacekeeping, the effect of *UN Military Troops*, *UN Police*, and *UN Observers* remains robust. These results provide confidence that our original findings are not spurious nor are they the product of an unobserved mechanism by which the UN engages in otherwise “easy” cases.

Finally, one criticism of the analyses may be that the negative effect of military troops and police forces on civilian victimization is the consequence of already declining levels of violence that result from a prior signal of the UN’s intent to intervene. Indeed, if the passage of a Security Council resolution initiating an operation is accepted by the factions as a strong signal of the UN’s commitment to intervene, then troops and police may arrive when violence is already subsiding. We therefore generate a dichotomous variable, *Resolution Passed*, to indicate that a resolution has been approved by the Security Council to initiate a forthcoming PKO. This variable takes a value of 1 in the month the resolution was passed and every subsequent month until PKO personnel begin to arrive in the conflict state. The variable thus accounts for months in which a resolution is in effect but for which forces have not yet deployed. We include this variable in model 5 and found it to be insignificant. Yet, the interpretation of our primary variables does not change upon the inclusion of *Resolution Passed*.⁹ These results indicate that

not present (0). For a full description of the matching process, the analysis described here, and several additional analyses using matching techniques, refer to the online SI document.

⁹ Another version of *Resolution Passed* was generated to equal 1 for every month during which the PKO resolution was in force, including all months leading up to and including the presence

violence employed by the combatants is not notably influenced by a signal of commitment inherent in the passage of resolutions. We remain confident that the effect of *UN Military Troops* and *UN Police* corresponds with our hypothesized expectations.

With regard to the control variables, we note a number of consistent results in Table 1. The coefficient for *Government Conflict* indicates that wars fought over control of the regime produce more anti-civilian violence relative to conflicts for territorial secession. Wars over government control may be seen as winner-take-all contests, inducing more violence due to the high stakes. The coefficient for *Population* is positive and statistically significant in models 1, 2, and 5. This indicates that increasing population generally induces higher levels of violence. However, the effect appears to be driven primarily by rebel violence, as the coefficient on *Population* in government-propagated violence does not reach conventional levels of statistical significance. Finally, the lagged dependent variables uncover inertia in groups' use of anti-civilian violence that matches findings in the repression literature (Davenport 1995; Poe and Tate 1994).¹⁰ The coefficients indicate that when civilians are killed in the month prior, more civilians are likely to be killed in the current month. This is true for both rebel (model 2) and regime violence (model 3). The remaining controls are statistically insignificant across each model. A war's duration does not appear to have a notable effect on victimization. Extended wars may be associated with war weariness or combatant frustrations with being unable to achieve war aims, but our analyses indicate these matters do not manifest in civilian mistreatment. The variables

of personnel in the conflict state. However, the results produced using this variable did not differ substantially from those reported in model 5.

¹⁰ The sample in model 4 is highly restricted, which is likely responsible for the reported insignificant effect of *Population* and the lagged dependent variable.

representing the number of soldiers lost in battle also reveal no significant results. However, it may be that we have not accounted for complexities in the relationship between the battlefield and victimization, including relative fatalities, accumulated losses of soldiers over time, casualties relative to existing soldier stocks, or battle outcomes unrelated to the death of soldiers. Also, the insignificance of the lagged independent variable for government killings in the rebel one-sided violence analysis (model 2) and the rebel killings variable in the government one-sided violence analysis (model 3) suggests that civilian targeting is not the product of reciprocation.

Discussion and Conclusion

We provide evidence that UN peacekeepers prevent civilian killings when they are appropriately tasked and deployed in large numbers. UN military troops achieve this by dividing combatants and negating the battlefield as an arena for civilian targeting. By separating factions, the threat of one side advancing militarily on the other is reduced, and windows of opportunity open for ceasefires, peace negotiations, and demobilization (Fortna 2008). The security dilemma between the belligerents becomes less debilitating, as the buffer of peacekeepers removes each faction's threat of subjugation by the other (Walter 2002; Walter and Snyder 1999). By quieting the guns on the battlefield, the destabilizing violence that results from fighting is muted. The UN has the ability to reduce civilian killings by increasing the number of military troops to a mission.

We also find that an increasing number of UN police is associated with fewer civilian deaths. Even if violence on the battlefield is reduced by PKO troops, the sides still have reason to shape civilian loyalties through violence behind the front. Violence can be used to forcibly recruit new combatants, extract more resources, and improve a faction's relative power in preparation for renewed conflict. However, the costs to predatory factions for targeting civilians increase when UN police forces patrol civilian communities behind the frontlines. Police forces thus play

an instrumental role in reducing the belligerents' opportunities to commit atrocities. Increasing UN police by just a few hundred can make a substantial difference in protecting civilian lives.

Our findings indicate that military observers are not adequate for civilian protection, as they are associated with an increased level of civilian casualties. This can be interpreted as a version of the moral hazard problem of humanitarian interventions identified by Kuperman (2005). Observers may in fact create incentives for civilian targeting, without having the ability to offer protection. However, all in all, our findings show there is reason for optimism regarding peacekeeping as a tool for civilian protection. If adequately composed with military troops and police, PKOs are effective at stifling anti-civilian violence and saving innocent lives.

Not only are properly constituted missions effective at preventing civilian deaths, PKOs are also a cost-effective form of intervention (Collier and Hoeffler 2006). For instance, the 8,000 troops needed to substantially reduce civilian killings in a given conflict-month cost slightly more than \$8 million, according to the flat monthly reimbursement rate for troop contributing countries.¹¹ To pay an additional 100,000 troops to serve would cost the UN approximately \$1.2 billion. This would be a radical troop increase, more than doubling the number of UN military troops serving worldwide in 2011. But the cost of this increase is less than 1% of global military spending, which was \$1.6 trillion in 2010 (Stockholm Peace Research Institute 2011).

The cost of peacekeeping is also likely to be lower relative to other military intervention options. Consider the spending on UN peacekeeping troops worldwide in 2008 compared to the spending on US troops in Iraq in 2008. The UN allocated \$6.7 billion to peacekeeping for fiscal year 2007-2008, and deployed 91,172 personnel worldwide. The US was responsible for 26% of

¹¹ The flat reimbursement rate is \$1,028 per soldier per month, as approved by the General Assembly in 2002, according to www.un.org/en/peacekeeping/operations/financing.shtml.

the UN peacekeeping budget in 2008, accounting for \$1.74 billion, or about \$19,000 per blue helmet. Comparatively, the US deployed approximately 145,100 troops to Iraq in fiscal year 2007-2008, and the Congressional Research Service estimates that the US spent \$127.2 billion on military operations in the country for a total of approximately \$877,000 per troop (Belasco 2011).¹² Considering the extreme human cost and the negative externalities caused by civilian atrocities, UN military troops and police units can be regarded as fairly economical options for the UN to enhance human security. Further research should investigate the effectiveness of UN peacekeeping relative to other instruments available to the international community, including coercive measures like sanctions and other approaches like diplomacy and economic aid. These findings have important policy implications. UN peacekeeping is seemingly better at reducing human suffering than more biased forms of intervention. Previous work finds that weakening civil war factions escalate their targeting of civilians (Wood 2010), leaving potential interveners that wish to avoid human rights atrocities with a conundrum. If third parties intervene and improve one faction's likelihood of victory, they may also increase the incentives of the opposed faction to mistreat civilians (Wood, Kathman, and Gent 2012). Biased intervention thus has the negative externality of increasing the civilian death toll. Intervention under UN auspices, however, is an effective instrument for protecting civilians. Properly outfitting peacekeeping operations with a sufficient number of peacekeepers can have dramatic implications for the reduction of civilian suffering in civil wars. Needless to say, the deployment of peacekeeping operations is a highly political decision and the capacity of missions is a direct result of political compromise. This becomes painfully apparent when the UN Security Council at times fails to

¹² These calculations include total operational costs. The US calculation is based on Department of Defense spending and do not include items such as Veteran's Affairs and USAID funding.

come to an agreement despite escalating civil war atrocities. In this context, it is therefore worth noting that our analysis suggests that the UN – which is often criticized for futile efforts – is indeed be an important institution when it comes to safeguarding human security. If the international community is serious about taking a collective responsibility for human protection, UN peacekeeping is a powerful tool for achieving this goal.

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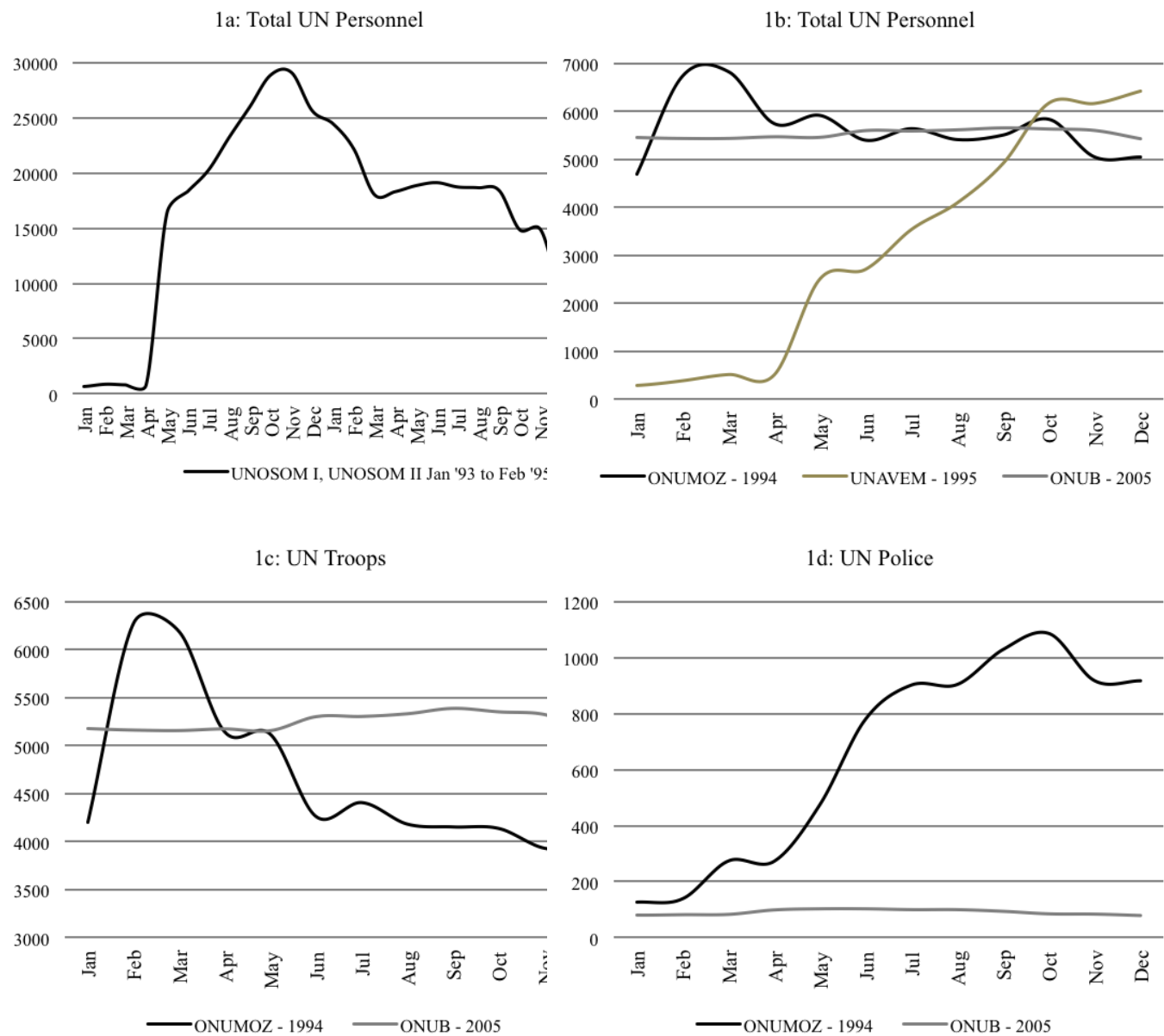
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Figure 1: Longitudinal Variation in Several UN Mission Force Commitments



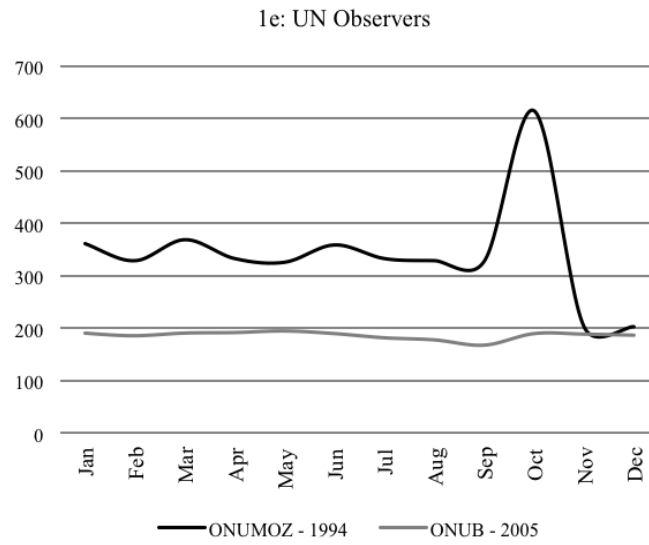


Figure 2: United Nations Peacekeeping Personnel and Civilian Casualties in Angola

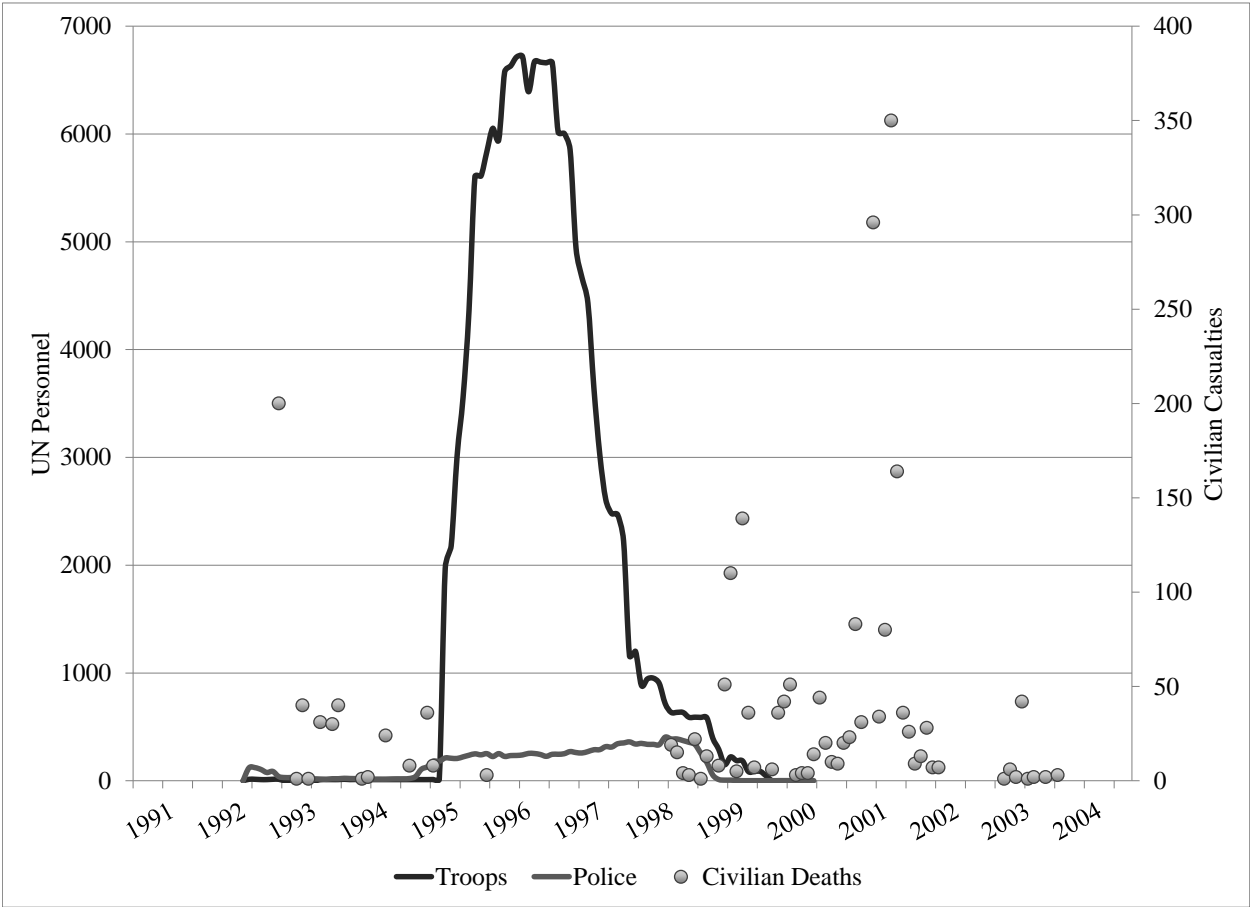


Figure 3: United Nations Peacekeeping Personnel and Civilian Casualties in the Central African Republic

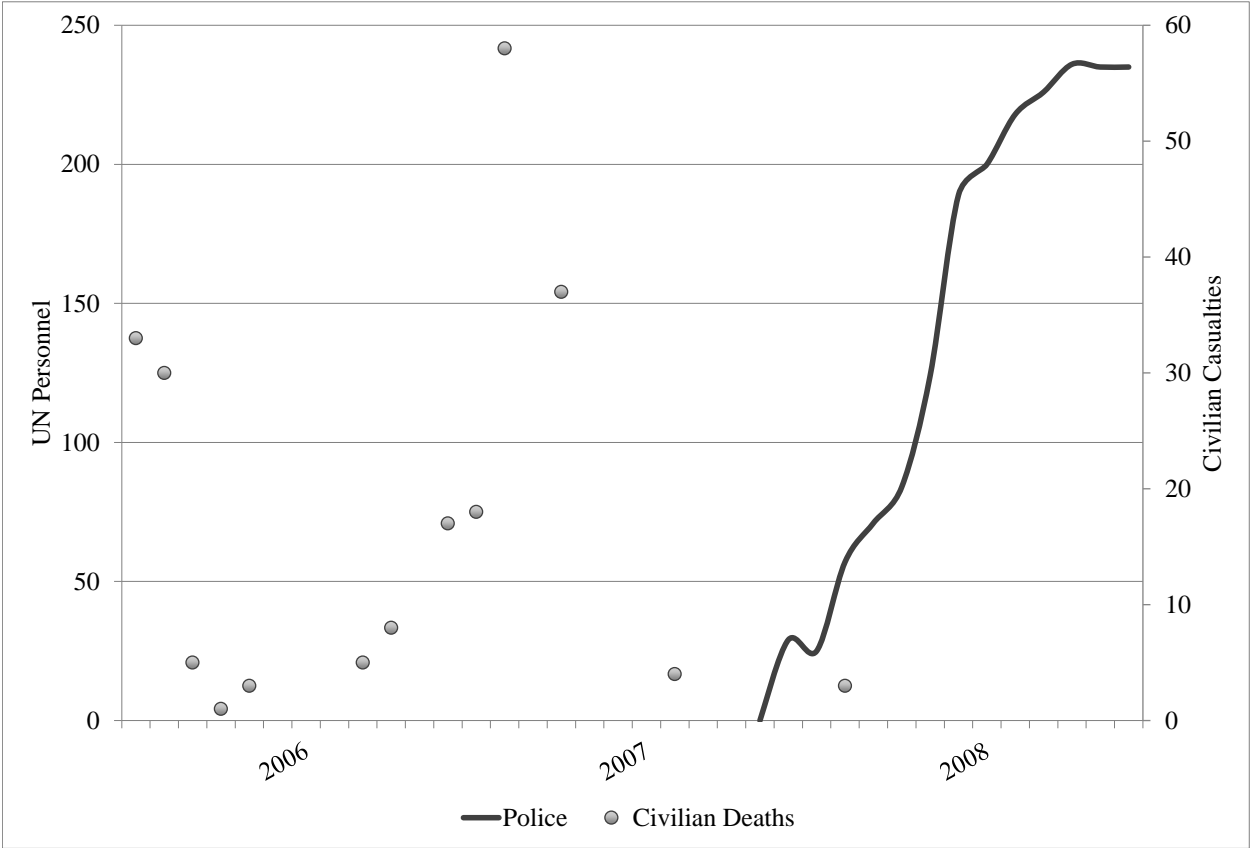
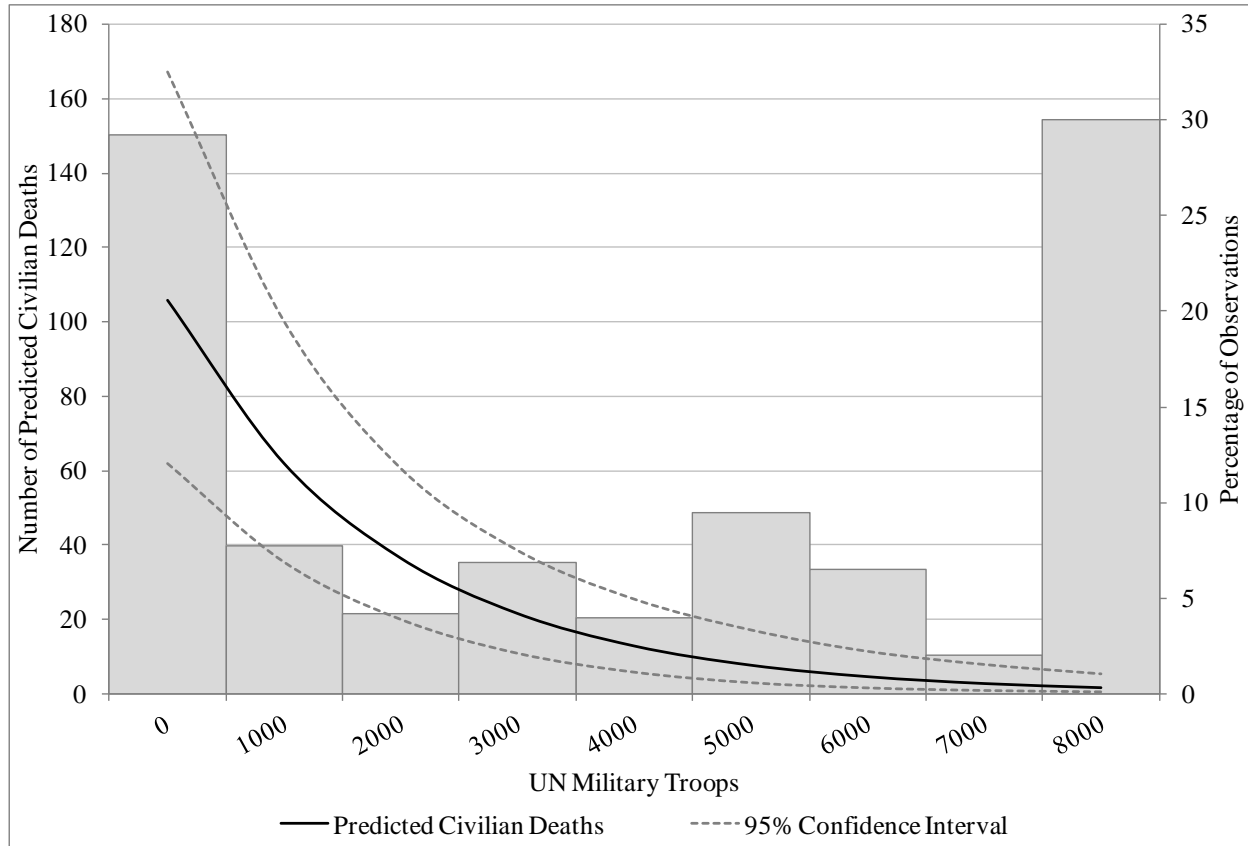
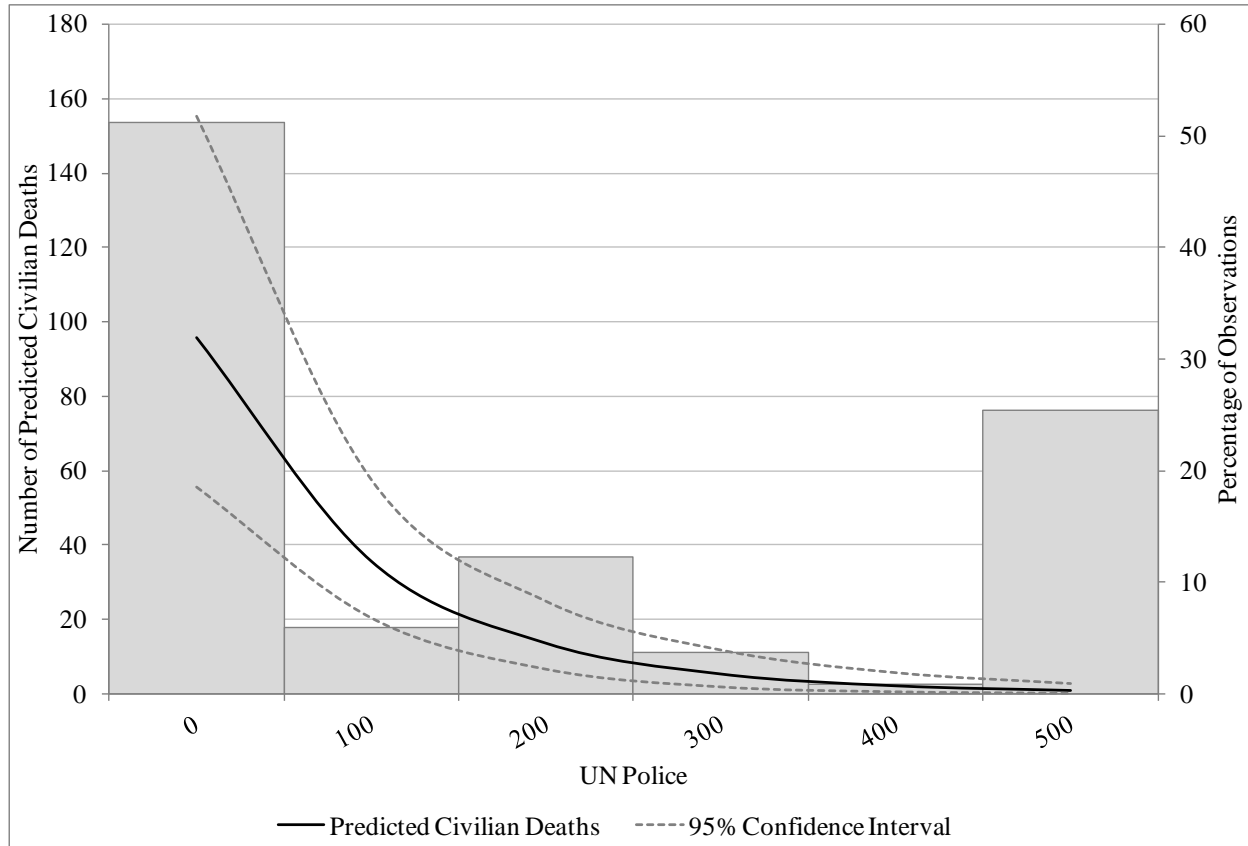


Figure 4: The Predicted Number of Civilian Deaths as UN Troops Increase



Notes: The plots are constructed using parameter estimates from model 1 in Table 1. The left vertical axis is labeled with the predicted number of civilian deaths and is used with reference to the plotted curve. The right vertical axis is for reference with the histogram. The histogram depicts the distribution of observations for the range of *UN Military Troops*. The x-axis labels the range of *UN Military Troops*. The plotted line reflects predicted values of civilian deaths for specific values of *UN Military Troops*. However, for readability, the histogram reports the percentage of observations for set categories across the range of *UN Military Troops*. For instance, the first bar in the histogram reports that approximately 29% of the observations for *UN Military Troops* fall within the range of 0 to 999 when a PKO is deployed. Each subsequent bar reports the percentage of observations within each respective 1,000 troop interval. The final category reports the percentage of observations at or above 8,000 to the variable's max at 29,209.

Figure 5: The Predicted Number of Civilian Deaths as UN Police Increase



Notes: The plots are constructed using parameter estimates from model 1 in Table 1. The left vertical axis is labeled with the predicted number of civilian deaths and is used with reference to the plotted curve. The right vertical axis is for reference with the histogram. The histogram depicts the distribution of observations for the range of *UN Police*. The x-axis labels the range of *UN Police*. The plotted line reflects predicted values of civilian deaths for specific values of *UN Police*. However, for readability, the histogram reports the percentage of observations for set categories across the range of *UN Police*. For instance, the first bar in the histogram reports that approximately 51% of the observations for *UN Police* fall within the range of 0 to 99 when a PKO is deployed. Each subsequent bar reports the percentage of observations within each respective 100 police interval. The final category reports the percentage of observations at or above 500 to the variable's max at 3,446.

Table 1: Effect of Peacekeeping Personnel on One-Sided Violence (OSV) Against Civilians in Civil War, 1991-2008

Variables	Model 1: All OSV	Model 2: Rebel OSV	Model 3: Govt OSV	Model 4: PKOs Only All OSV	Model 5: Resolution Timing All OSV
UN Military Troops _(t-1)	-0.53*** (.09)	-0.26*** (.05)	-0.69*** (.19)	-0.48*** (.10)	-0.53*** (.09)
UN Police _(t-1)	-9.90*** (1.55)	-3.90*** (1.00)	-8.39*** (2.46)	-6.53*** (1.87)	-9.87*** (1.56)
UN Observers _(t-1)	21.76*** (3.96)	7.30*** (2.12)	23.31*** (3.55)	19.88*** (4.89)	21.72*** (3.96)
Conflict Duration	-0.0006 (.0038)	-0.001 (.004)	0.002 (.005)	-0.01 (.01)	-0.0002 (.0039)
Government Conflict	2.38*** (.43)	3.53*** (.60)	2.07** (.71)	-- [†]	2.41*** (.44)
Population	0.70*** (.17)	0.61* (.24)	0.55 (.31)	-0.46 (.69)	0.71*** (.17)
All Battle Deaths _(t-1)	0.001 (.001)	--	--	0.006 (.003)	0.001 (.001)
Rebel Battle Deaths _(t-1)	--	0.01 (.004)	0.004 (.006)	--	--
Govt Battle Deaths _(t-1)	--	-0.0003 (.0003)	0.0002 (.0008)	--	--
All OSV Dummy _(t-1)	2.18*** (.28)	--	--	1.22 (1.16)	2.17*** (.28)
Rebel OSV _(t-1)	--	--	0.001 (.002)	--	--
Rebel OSV Dummy _(t-1)	--	2.69*** (.37)	--	--	--
Govt OSV _(t-1)	--	-0.0001 (.00004)	--	--	--
Govt OSV Dummy _(t-1)	--	--	1.57*** (.45)	--	--
Resolution Passed	--	--	--	--	-0.67 (1.01)
Constant	-9.24*** (2.08)	-11.21*** (2.73)	-7.51* (3.77)	6.25 (6.34)	-9.31*** (2.08)
Alpha	16.89*** (3.42)	19.91*** (5.17)	43.72*** (12.55)	12.31*** (3.97)	16.87*** (3.41)
Observations	3,746	3,746	3,746	528	3,746
Conflict episodes [§]	49	49	49	15	49
Wald X ²	468.16***	495.50***	621.64***	381.41***	461.46***
Log pseudo-likelihood	-6,260.15	-4,564.12	-3,287.41	-1,226.84	-6,259.22

Estimated with robust standard errors clustered on conflict

*** Significant at p<.001, ** p<.01, * p<.05, two-tailed

[†] Variable dropped due to collinearity.

[§] The conflict episodes have a mean duration of 65 months (maximum duration 216); the same for Model 4 is 85 (216).

