Article

Cut Short? United Nations Peacekeeping and Civil War Duration to Negotiated Settlements

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Abstract

While much literature on peacekeeping seeks to determine the effect of United Nations (UN) intervention on post-conflict peace processes, most peacekeeping operations (PKOs) are deployed to active conflicts. The limited research on peacekeeping in active civil conflicts suggests that robust PKOs reduce hostilities. Yet, if PKOs serve to extend conflict duration, even lowered hostilities can yield greater destruction over time. We thus explore the effect of peacekeeping on conflict duration. We argue that PKOs with larger troop deployments are better able to increase the cost of combat, improve information sharing between belligerents, and provide security guarantees, thus reducing the time to negotiated resolutions. Using fine-grained data on monthly peacekeeping personnel commitments and observations of ongoing conflict between combatants, we examine how variations in mission deployments affect the success of UN peacekeeping in ending civil conflicts. As expected, our findings indicate that larger troop deployments shorten war duration to negotiated resolution.

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In the initial months of 2012, the United Nations (UN) sought to manage the ongoing civil war in Syria, which had raged for over a year. The conflict had been defined by gross human rights abuses, obscene tactics, and the massive use of purposeful violence against civilians. Still a cease-fire had been brokered among the combatant factions, opening a door of opportunity in April for the deployment of the UN Supervision Mission in Syria (UNSMIS). The operation was a tepid initial effort on the UN's part, as it included a very limited deployment that peaked at only 278 unarmed observer personnel. Lacking a significant enforcement mechanism for maintaining the tenuous cease-fire, fighting would resume shortly after the peace-keepers arrived. Hostilities would become so intense that the UN would soon with-draw its personnel, fully disengaging just four months after the mission's arrival.

A similarly brutal civil war raged between the government of Sierra Leone and the Revolutionary United Front (RUF) in the 1990s. The UN sent peacekeepers to address the war and to mitigate unrestrained violence against the noncombatant civilian population. As in the case of Syria, the initial efforts under the UN Observer Mission in Sierra Leone did not lead to peace. Yet the UN's response to this lack of progress differed from its conduct in Syria. Rather than withdrawing its personnel, the UN redoubled its efforts. The newly comprised UN Mission in Sierra Leone (UNAMSIL) was substantially expanded and tasked with protecting civilians, resist-ing the combatants when confronted, and actively pursuing peace via disarmament, demobilization, and the physical separation of factions. UNAMSIL would soon become the largest UN peacekeeping mission in Africa, peaking at nearly 17,500 blue helmets, the vast majority of which were armed and capable troops. With UNAMSIL's expansion, a war that raged for nearly a decade saw a decline in violence. The government and the RUF would soon negotiate a resolution to the hostilities, and the war would end in a codified peace agreement.[1]

What explains the difference in peacekeeping outcomes in these two cases? We suggest that the UN's ability to pursue peace in ongoing conflicts is at least a partial product of the personnel commitment that the UN makes in its peacekeeping efforts. The difference in mission composition across these two cases could hardly be starker, with UNAMSIL being significantly more robust than UNSMIS. The larger, more fully equipped UN operation had a greater capacity to separate the combatants, monitor agreements, share information between the combatants, and facilitate dis-armament, making more credible a durable halt to the violence. Substantial UN deployments, we posit, can play an important role in reducing commitment problems and facilitating the flow of information, which should be better able to help conflict actors move more quickly toward negotiated settlements and peace agreements in active civil wars.

While past work has largely focused on the presence of a peacekeeping operation (PKO) and its ability to build peace in post-conflict states, we focus on the variation of peacekeeping levels both across and within UN operations. We test the relation-ship between troop levels and the time to negotiated settlements with monthly data on civil war and UN peacekeeping for all post–Cold War conflicts in Africa, Asia,

and the Middle East from 1992 to 2014. The results from a competing risks model of civil war duration support the hypothesis that larger troop deployments reduce the duration of civil wars to negotiated solutions such as cease-fires and peace agreements. The findings, we suggest, contribute to the expanding peacekeeping effectiveness literature and have important policy implications.

UN Peace Operations and Intervention Effectiveness

The literature on UN peacekeeping effectiveness has historically been somewhat mixed on the UN's ability to promote peace in war torn and post-conflict states. Much early work on this topic took a qualitative approach, and many assessments suggested an impotence on the UN's part in achieving such mission mandates as protecting civilians and paving the way to peace (Jones 1999, 2001; Boot 2000). Some early quantitative research produced similar results. This work often looked at the effect of peacekeeping on postwar peace, assessing the tendency of civil wars to recur and the ability of PKOs to extend the duration of peace post-conflict. Initial quantitative studies, for example, pointed to the UN's inability to thwart conflict recidivism (Diehl, Reifschneider, and Hensel 1996). Subsequent work, however, began to focus on the UN's propensity to intervene in the most difficult, intractable conflicts. Accounting for this, the presence of UN peacekeepers was generally found to have a positive impact on the maintenance of peace after civil wars (Gilligan and Stedman 2003; Fortna 2004, 2008).[2]

A hallmark of this literature has been a notable focus on assessing the effect of PKOs in *post*-conflict conditions. Much research has implicitly viewed peacekeeping as a phenomenon that occurs *during peace* and thus should be assessed on its ability to maintain that peace. However, in the post–Cold War era, the original conception of UN missions as a post-conflict guarantor of peace is not reflective of the UN's full range of contemporary responsibilities. Indeed, peacekeeping in the past three decades has increasingly been an exercise in peacemaking and peacebuilding. This change in operational duties has often been associated with more complex and robust mandates as well as larger military deployments to active wars where there was no established peace to maintain upon deployment.

As such, it is important to more fully consider determinants of UN mission effectiveness in times of war. Previous research on peacekeeping effectiveness has focused on the quality of post-conflict peace (Kathman and Wood 2016), the containment of war diffusion (Beardsley 2011b), protecting civilians (Hultman, Kathman, and Shannon 2013), and improving cooperation between belligerent factions (Ruggeri, Gizelis, and Dorussen 2013). However, the pursuit of conflict resolution is another critical element of peacekeeping effectiveness, given the marked tendency of the UN to intervene in active civil wars.

Recent research has also pointed to the fact that UN missions are not equally capable of pursuing intervention goals. Mission composition, operational activities, and various deployment patterns have been ways in which scholars have

disaggregated PKOs to reveal their differential ability to pursue peace processes. These more finely detailed, quantitative representations of peace missions offer improvements over the traditional dichotomous indicators of the presence or absence of a peace mission in the host state. PKOs come in many shapes and sizes, are variously tasked, and engage in diverse activities. Simple dichotomous indicators of PKOs are not helpful in revealing inter- and intramission heterogeneity.

Recent research has begun to assess the consequence of different types of UN peacekeeping in active conflict. As an example, Hultman, Kathman, and Shannon (2014) report that as the number of troops committed by the UN to its missions increases, the number of monthly battlefield deaths that occur in civil war decreases. Substantively, the authors indicate that missions deploying 10,000 soldiers reduce battle deaths to six per month. Interestingly, using the authors' coding scheme, six deaths per month would be sufficient to exceed the twenty-five battle deaths threshold to be considered an *active* conflict. Thus, while the authors show a significant decline in battle deaths that results from a large-scale mission, it is unclear whether even substantially outfitted PKOs have the wherewithal to decrease the duration of civil conflicts by bringing battlefield hostilities to an end.

One important concern would then be that UN missions can reduce the hostilities of ongoing wars, but such a positive development would potentially be for naught if the effect of peacekeeping is to simultaneously lengthen conflict duration. In other words, the reduced monthly battlefield hostilities that result from UN missions could potentially be associated with a larger number of overall conflict deaths if UN missions extend the duration of civil wars. Thus, the effect of UN peacekeeping on civil war duration should be of great interest to both research and policy communities.

Impediments to the Peaceful Termination of Civil Wars

The literature above suggests that UN peacekeeping can have an important effect on limiting violence in civil wars. Of course, a first-order goal of PKOs in active conflict is to facilitate an end to violence (Diehl and Druckman 2010). There are, however, multiple roads that lead to civil war termination. The first of these is the military defeat of either the government or rebel forces. Victories are often obtained as a result of a preponderance of forces on one side of the conflict, leading to shorter wars (Mason, Weingarten, and Fett 1999). Unsurprisingly, then, "civil wars last a long time when neither side can disarm the other, causing a military stalemate. They are relatively quick when conditions favor a decisive victory" (Fearon 2004, 276). Thus, some civil wars such as those in Myanmar and Colombia last for several decades, while others gradually fizzle to a conclusion without a clear political resolution.

Most often, civil war victory is not quickly obtained, and the government and rebels attempt to negotiate an end to their hostilities (Hegre 2004; Hartzell 2006; Brandt et al. 2008; Kreutz 2010). Yet the path to a lasting negotiated peace is rarely

an easy one. Pushing combatants away from peaceful resolutions is the reality that some belligerents perceive greater benefits from warfighting than peace (Powell 2012). Furthermore, there may be a general expectation on the part of the combatants that it is arduous, if not impossible, to overcome inter-combatant mistrust and hostility. As noted by a growing body of work, seemingly intractable civil wars are the types of conflicts to which the UN most regularly deploys (Fortna 2004, 2008; Gilligan and Sergenti 2008; DeRouen 2012). Still, when enduring conflicts are marked by a balance of forces or hurting stalemates (Zartman and Touval 1985, Zartman 1993), the factions may be ready to push for negotiations rather than battlefield victory (Melin and Svensson 2009).

Unfortunately, as the rationalist literature notes, even when peaceful outcomes are preferred, negotiated settlements are often difficult to achieve for two reasons. First, the combatants lack critical information about one another's intentions, capabilities, and resolve. In bargaining over disputed resources, it is difficult for the factions to find mutually acceptable terms that satisfy their interests and reflect their balance of capabilities. Indeed, these information asymmetries are exasperated by the fact that each side has an incentive to misrepresent their demands as more extreme in an effort to secure a better deal (Fearon 1995; Wagner 2000). Second, even if a deal between the belligerents can be reached, these agreements are often sabotaged by commitment problems. In particular, the factions must begin the process of demobilizing. Most notably, upon resolution, the rebels must eventually lay down their arms and begin the process of reintegration into the post-conflict political landscape. In so doing, rebel forces expose themselves to exploitation by the government.

Consequently, rebels are often hesitant to pursue a negotiated resolution short of credible security guarantees that ensure their survival and the implementation of an agreement's terms. As Walter (1997) notes:

> . . . civil war opponents are asked to do what they consider unthinkable. At a time when no legitimate government and no legal institutions exist to enforce a contract, they are asked to demobilize, disarm, and disengage their military forces and prepare for peace . . . (N)egotiations fail because civil war adversaries cannot credibly promise to abide by such dangerous terms. Only when an outside enforcer steps in to guarantee the terms do commitments to disarm and share political power become believable. Only then does cooperation become possible. (pp. 335, 336)

This inability of civil war actors to credibly commit to avoiding rearmament can prevent them from coming to the negotiating table and lead to longer civil wars (Fearon 2004; Powell 2006). The body of literature above implies that if peacekeeping is to make negotiation more attractive and ultimately more successful in achieving a durable settlement, it must make combat a less attractive means of conflict resolution, assist in resolving the information asymmetries that afflict the combatants' ability to locate acceptable settlements, and resolve the commitment

problems that inhibit their ability to abide by a resolution's terms. We suggest that the UN can assist in alleviating many of these concerns by deploying robustly composed PKOs. By interceding between the combatants, sharing sensitive information, and pursuing disarmament and demobilization processes, UN PKOs provide essential services that make the negotiating environment more attractive and commitments more stable.

Peacekeeping Activities and the Facilitation of Negotiated Settlements

The ideal role of a third party in conflict resolution "is to provide enough incentives for peace to prevent defection until the political and security relationships have been consolidated and vulnerability decreases" (Beardsley 2011a, 172). Third parties may positively affect a civil war by changing the payoffs of the conflict for the combatants, by altering the flow of information, and by making it more difficult to pursue victory through combat (Kydd 2010). When appropriately equipped, UN missions are well-placed to perform these functions, thereby improving the prospects for a durable negotiated outcome.

As stated above, information asymmetries and commitment problems obstruct the combatants' ability to arrive at mutually acceptable terms. Conflict opponents lack critical information about one another's intentions and willingness to abide by de-escalation processes. Additionally, rebel and government forces cannot commit to peace and demobilize, given the security dilemma they face. In order to clear the path to peace, PKOs must address impediments to negotiation and resolution. UN peacekeeping pursues this end by (a) improving the stability of the conflict environment and clearing the path for good faith negotiations by making combat less attractive for achieving conflict outcomes, (b) improving the ability of the factions to locate a resolution that satisfies the interests of both actors through the provision of information, and (c) reducing the incentives of the combatants to renege on their commitments to peace.

Stabilizing the Conflict Environment

One of the primary mechanisms by which PKOs seek to improve the stability of the conflict environment and reduce battlefield hostilities is by physically interceding between the factions. UN peacekeepers seek to separate the sides territorially, thereby reducing the killing capacity of the conflict and increasing the costs of continued war perpetuation for both sides (Hultman, Kathman, and Shannon 2013, 2014). Even in instances in which a cease-fire is not in force, the UN often seeks to implement territorial buffer zones as a standard practice in an effort to reduce violence (Ruggeri, Dorussen, and Gizelis 2016).

Territorial intercession makes it difficult for either side to engage the other in battle. As such, peacekeeping deployments serve as a physical barrier to

confrontation, the breaching of which could come with significant combat losses and international audience costs. For one, PKO personnel are mandated to protect themselves from attack. Overcoming a wall of blue helmets in pursuit of combat gains may result in military losses for the aggressive party at the hands of UN troops, as has occurred in Sierra Leone and the Democratic Republic of the Congo (Berman and Labonte 2006; Holt, Taylor, and Kelly 2009). Challenging a PKO deployment militarily also risks inviting a more robust and punishing intervention from members of the international community or the UN itself. Further, assuming the factions ultimately seek control of the state and membership in the global community of states, the audience costs associated with confronting blue helmets militarily can have a substantial, negative effect on the faction's post-conflict ability to govern.

In this way, PKOs affect conflict decision-making by driving up the cost of continued conflict and concomitantly driving down the expected gains of combat for achieving political goals (Powell 2004). Impediments to continued conflict, like territorial intercession, reduce the expected utility of continued fighting for the achievement of political goals. When rebel and government forces realize that limited opportunities exist for battlefield efforts, they are more likely to pursue negotiated means of conflict resolution.

As an example, the UN mission to the Ivory Coast (UNOCI) sought to separate regime forces in the south from the rebels in the north in an effort to reduce hostility levels and pursue elections (Novosseloff 2015). While eruptions of violence were not uncommon, the ability of the UN to maintain separation otherwise reduced the combatants' willingness to engage in open hostilities. For instance, having lost the election, sitting President Laurent Gbagbo sought to invalidate the results and reengage in combat by shelling opposition positions. However, UNOCI, which had been outfitted with additional troops and a more expansive mandate to repel regime attacks, assisted in thwarting the government's aggressive tactics (UN 2011).

Information Provision

Of course, third-party interventions may backfire if the interveners merely delay conflict resolution by providing a temporary reprieve from fighting and decreasing time pressures on negotiation. Fighting reveals information about combatant intentions, capabilities, and resolve. To the extent that this revealed information helps the factions locate acceptable terms, and to the extent that peacekeeping reduces the battlefield activity through intercession, PKOs may restrict information conducive to resolution (Greig and Diehl 2005). Thus, peacekeeping must not only reduce the expected utility of combat. It must also increase the viability of negotiation as a solution to conflict.

However, interceding between the combatants also serves as a basis for monitoring combatant behavior. By physically interposing between the belligerents, UN peacekeepers are able to observe their activities, sharing that information in an impartial way to improve interfactional trust that neither side is mobilizing for an

offensive. Thus, territorial intercession has the effect of limiting the battlefield element of surprise. A destabilizing aspect of civil conflict is the ubiquitous possibility that a combatant group may attack at any time. The perpetual combat readiness that this engenders promotes a hair-trigger nature of civil conflict in which hostile acts can produce a spiral of violence. Unsurprisingly, overcoming a history of conflict and distrust between actors can be difficult (Pruitt and Olczak 1995).

The presence of peacekeepers assists in this process through the provision of information, as combatant movements and mobilization processes can be monitored. Information that is verified by the UN and shared with the parties is more trustworthy relative to information shared directly because the sides have incentives to manipulate the information that is shared directly between them in an effort to achieve more attractive resolution terms. The UN seeks to increase the flow of information by publicly transmitting it via press reports and direct transmission. This thus has the effect of devaluing the element of surprise and increasing combatant confidence in one another's goodwill peace efforts. The UN missions to East Timor offer an example. When more fully equipped with sufficient troops to patrol the border region, UNAMET and, more consequentially, UNTAET capably monitored belligerent forces. In particular, Falintil fighters voluntarily remaining cantoned prior to the independence referendum in large measure due to the group's expectation that UNTAET would relay information on militia border incursions (Smith and Dee 2006). Separation thus improved the UN's ability to carry out its mandated goals.

The tactical and informational benefits of intercession decrease the relative value of combat and improve combatant expectations of their opponent's good faith commitment to negotiation. However, to arrive at negotiated solutions, the sides must be able to locate an agreement that is mutually satisfactory. This is no easy task given the historic distrust that often defines inter-combatant relations, creating an inertia of continued conflict. Greig and Diehl (2007) suggest that this conflict inertia can be overcome through a process of "softening up" (pp. 363, 364). This softening occurs through both the historic pain in the relationship between the conflict actors and through the promise of a better relationship through repeated attempts at diplomacy, something that a PKO's information provision function serves to support.

Research on third-party mediation points to the importance of these information provision functions. Much of the research evaluating successful negotiated settlements notes that a third party can be useful in helping factions to overcome their history of hostility. Peacekeepers facilitate communication between combatants. Such an information flow is critical to build trust between the government and rebels, which is necessary for successful conflict resolution (Kydd 2005, 2006). Intergovernmental organizations, like the UN, commonly serve as direct mediators in negotiations in an effort to facilitate information flows between the combatants (DeRouen, Bercovitch, and Pospieszna 2011; Greig and Diehl 2012; Regan, Frank, and Aydin 2009), acquiring, verifying, and sharing information useful to negotiations. As was the case in the Liberian conflict, when UN mediation is teamed with a

deployed PKO, peace may be more effectively brokered since mediation efforts are teamed with "muscle" (Sisk 2009).[3]

Providing Security Guarantees

PKOs also improve the parties' confidence in following through on negotiated outcomes by providing security guarantees to help combatants follow through with agreed terms (Walter 2002; Hultman, Kathman, and Shannon 2014; Fortna and Howard 2008). While often considered a post-conflict impediment to continued peace, commitment problems can be conceptualized as inhibiting the combatants' ability to agree to terms in the first place. The ex ante unwillingness to follow through with a peace accord inhibits progress toward the codification of any such accord in the first place. As such, commitment problems have the effect of elongating conflict (Powell 2006), at times causing the factions to waffle back and forth between combat and cease-fires that predictably fail short of credible security guarantees.

The East Timor example is illustrative, as Falintil's willingness to follow through with the agreed political resolution and keep its forces disengaged relied upon the UN's willingness not simply to monitor militia border incursion but also on the UN's mandate to resist, apprehend, and detain those armed actors that sought to spoil the progress of political resolution (Smith and Dee 2006). Indeed, the mandate was defined expansively to include an authorization "to exercise all legislative and executive authority, including the administration of justice" (UN 1999). The factions could thus expect that efforts to renege on negotiated promises would be met with punishments, thus enforcing guarantees of security.

One means by which PKOs help guarantee security is in disarming, demobilizing, and reintegrating the factions into the post-conflict political system. By engaging in this process, the factions can have greater faith that their opponent will not have the capacity to renege on peace through force (Hultman, Kathman, and Shannon 2014). In demobilizing, the government's forces can begin to step back from its war footing, and rebels can begin to lay down their arms. While often considered a post-conflict process, the UN has engaged in disarmament in ongoing conflict (Holt and Berkman 2006), raising the cost of resorting to hostilities, and increasing the attractiveness of negotiated terms. As such, territorial separation and disarmament motivate the combatants to continue with resolution away from the battlefield. DeRouen and Chowdhury (2018) additionally suggest that peacekeeping teamed with outside mediation is particularly powerful in overcoming commitment problems, and this decreases the probability of conflict recurrence, making peace agreements more durable.[4]

Peacekeeping Capacity and Securing Peaceful Resolutions

Given the peace purveying mechanisms above, it is interesting that some prior research has not revealed a significant relationship between UN efforts and peaceful resolutions to conflict. While Beardsley (2012) admittedly addresses a different

class of conflicts by evaluating international crises, he finds that UN military involvement is not associated with an increased likelihood of a compromise outcome. Further, Greig and Diehl (2005) study civil wars from 1946 to 1999, finding that conflicts with peacekeeping have an insignificant correlation with negotiated outcomes.[5] Both articles take a similar empirical approach in focusing on the presence or absence of a PKO in each conflict/crisis. Such an operationalization suggests that all missions are equal in their ability to motivate negotiated resolutions.

In contrast, we argue that the ability of the UN to facilitate movement toward a negotiated end to a civil war lies largely with its level of engagement. Larger, more robustly constituted missions can more effectively manage conflicts. The effectiveness of an operation's intercession, information provision, and security guarantee is not a simple binary function of the PKO's presence or absence. The UN's commitment to these efforts is more accurately illustrated as existing on a continuum, where larger missions are more fully outfitted to engage in peace processes. For instance, a PKO's ability to monitor combatant behavior and relay this information to the parties depends on its physical ability to patrol contested regions. Larger missions are more fully outfitted to fulfill this function, providing the factions with fuller information. Relatedly, the viability of the mediation and negotiation process, which may be reliant on UN monitoring for effectively locating an acceptable deal, is directly dependent on a PKO's capacity to provide this information. For security guarantees to be valid, both sides must believe that the actor providing the guarantee is sufficiently credible (Powell 1999, 2012; Thyne 2009; Kathman and Wood 2011). The greater the UN's ability to protect each side from attacks by its adversary via separation and disarmament, the more likely its security guarantee will be seen as credible and thus capable of maintaining progress toward peace. Therefore, increasingly capable missions should be increasingly likely to affect the actual conflict calculi of the parties, improve their ability to locate viable resolutions, and secure those resolutions when agreed upon.

In evaluating a mission's capability, of particular import is the size of its troop deployment. While PKOs are composed with various personnel types, including armed troops, lightly armed police units, and unarmed observer personnel, recent research points to the critical role played by UN troops in mitigating conflict processes (Hultman, Kathman, and Shannon 2013, 2014, 2016; Beardsley 2011b; Ruggeri, Gizelis, and Dorussen 2013).[6] This work has indicated that an increasing number of armed UN troops has the effect of improving conflict conditions. Larger troop commitments allow the UN to increase the size of the territorial buffer. This has the effect of further ensuring combatant trust that its opponent will not resume battlefield hostilities.[7] This positive effect of troop deployments was echoed by the UN's (2007) Deputy Secretary-General, Asha-Rose Migiro, who noted that "... peace missions are a vital tool to fulfill one of the UN's most important responsibilities. That is the maintenance of international peace and security. UN troops provide space and breathing room that encourage warring parties to cool down. They also enable political processes to take root, and peace dividends to bear fruit." As the

number of troops increase to enforce that territorial breathing space, we can expect the likelihood of conflict resolution to increase as well.

Further, larger numbers of armed troops increase a PKO's capacity to engage in and accelerate disarmament, reducing the killing capacity of the factions. Larger troop deployments serve as a signal of the international community's commitment to the conflict. Larger troop deployments are also more difficult to withdraw short of damage to the UN's reputation as the premier organization for addressing threats to international security. This incentivizes the UN to remain committed to the conflict in order to avoid reputational decay. The belligerents know this and thus interpret larger troop deployments as a long-term commitment from the UN to the peace process. Combatant forces can thus more confidently commit to negotiations, take advantage of the information sharing functions of PKOs, and begin the process of demobilization in the belief that the UN will not soon withdraw.

An example of these processes at work can be seen in the UN Operation in Burundi (ONUB) from 2004 to 2007. Burundi experienced a succession of civil wars starting in 1965 and was plagued with an enduring ethnic conflict and several failed attempts at democratic governance (Ngaruko and Nkurunziza, 2005). Initially, UN peacekeepers deployed to Burundi to help facilitate the implementation of the Arusha Agreement, signed in 2000. Even with this agreement in place, the conflict in Burundi remained active and violent. It was not until ONUB began rapidly escalating its troop deployment to Burundi, peaking at 5,400 troops, that violence began to decline. Another series of negotiations ultimately yielded the Dar-es-Salaam agreement in 2006, which ended a decade of hostilities (Boutellis 2014, 738). In this effort, peacekeepers were responsible for facilitating negotiations; monitoring cease-fires; disarming, demobilizing, and reintegrating ex-combatants; and creating the necessary security conditions for a stable polity. While not without its challenges, ONUB is generally considered a success story (Boutellis 2014) and was notable in that it was "able to win the trust and confidence of a majority of the formerly warring leaders as well as of the population" (Howard 2008, 318). In short, ONUB incentivized cooperation, by creating an environment in which a stable political situation could be obtained (Beardsley 2011a).

A similar process played out in Sierra Leone where UN missions had long struggled to progress toward peace. In fact, in a renunciation of the cease-fire in 2000, an RUF offensive included the kidnapping of hundreds of blue helmets, pushing UNAMSIL to the brink of collapse. The UN's response was to expand UNAMSIL's troop deployment substantially in tandem with opening new mediation efforts to bring the government and the RUF back to negotiations. Simultaneously, UNAMSIL began confronting militia violence and demobilizing insurgent and government forces away from their war footing (UN 2005).[8]

These cases illustrate the importance of operational capacity regarding peacekeeping missions' abilities to shorten conflict to peaceful resolutions. All told, increasingly large troop deployments serve to increase the cost of combat as a means of resolving the conflict. As a result, the sides are more likely to seek alternative

means of resolution via negotiated settlement. Their willingness to pursue this path is buttressed by an improved capacity of the UN to monitor the conflict environment and share important interfactional information, further supporting the mediating role often played by the UN and other third parties. More troops also improve the credibility of the signal sent to the combatants as peacekeeping troop deployments increase in size, indicating that the UN is committed to resolution. By changing the calculus of combat and opening the door to a credible cease-fire or peace agreement, larger troop deployments should have the effect of shortening civil wars to negotiated outcomes. The above discussion leads us to the following testable hypothesis:

> **Hypothesis**: As the number of PKO troops committed to civil war increases, the duration of civil war to negotiated outcomes decreases.

Research Design

To most fully leverage the fine-grained nature of the peacekeeping data, we construct a monthly data set to test the effect of UN troop levels in reducing or extending civil war duration to negotiated outcomes. The Uppsala Conflict Data Program (UCDP) Conflict Termination Dataset (Kreutz 2010) builds from the UCDP/Peace Research Institute, Oslo (PRIO) Dyadic Dataset (Harbom, Melander, and Wallensteen 2008), recording information on each government–rebel group pair in armed conflict that exceeds a minimum of twenty-five battle-related deaths in a given year. These data allow us to construct a monthly conflict data set with precise start and end dates to analyze conflict duration. The data also allow a parsing of information to each government–rebel group pairing. Some conflicts may include multiple rebel organizations that independently challenge the government. As such, even within conflict systems, individual government–rebel group dyads may differ from others in terms of the length of their hostilities, given the characteristics of the groups and the nature of their challenge to the government. Our analysis thus assesses government–rebel group dyads at the monthly level.

Considerate of the spatial and temporal domains of each of our variables (described below), our data span all conflicts in Africa, Asia, and the Middle East from 1992 to 2014. In our fully specified model, our sample of civil wars under evaluation includes thousands of monthly observations with information on 237 independent government–rebel group dyad episodes.[9]

Dependent Variable

The UCDP Termination Data report information on the means by which each dyad concluded its hostilities, including conflicts that ended via negotiated resolution, outright victory of either the government or rebel forces, cessation through low activity (i.e., too few battle deaths in a given period for the conflict to be coded as ongoing), or one of the two actors in the dyad ceases to exist.[10] Our dependent

variable measures the time in months from conflict dyad onset to one of the above termination types. Of particular interest, given our theoretical arguments, is the duration of war to negotiated resolution relative to other termination types.

We specifically conceptualize negotiated resolutions as those including UCDP-coded cease-fire and peace agreement termination types. Cease-fire terminations are coded when the combatants agree to halt hostilities without codifying a formal resolution to their ongoing political dispute. Peace agreement terminations not only halt the violence but also include a codification of political dispute resolution between the parties. For both of these conflict outcomes, the parties have negotiated an enduring end to their fighting. While formal peace agreements are more comprehensive commitments, both resolutions are negotiated between the parties and both, according to UCDP coding rules, are associated with a cessation of battle violence such that combat deaths do not exceed twenty-five for a full calendar year (Kreutz 2010). We thus believe that both cease-fires and peace agreements are reasonably combined in that they open a door of opportunity for a long-term consolidated peace, where both parties have not otherwise been vanquished in the course of conflict.

When analyzed, 82 conflict dyad episodes terminated in a negotiated settlement; 140 terminated as the victory of one side over the other, actor cessation, or de-escalation to low activity; and fifteen were censored as they had not yet concluded by the end point of our data.

Independent Variable

To test our hypothesis on UN troop deployments and war duration to negotiated resolutions, we rely on fine-grained data on civil war and UN peacekeeping. Data on UN troop commitments are taken from Kathman (2013) and include an accounting of the number of UN troops committed to each UN mission in the post–Cold War era at the monthly level. The number of blue helmets deployed by the UN to mission host states can vary dramatically between missions. For instance, whereas the UN mission to Morocco never included more than 250 armed soldiers, the mission to Somalia at one point reached nearly 30,000. These are distinct differences in mission capacities that would otherwise be obscured by the more common categorical indicators of PKO deployments that have traditionally been employed in peacekeeping research.

Further, PKOs can vary greatly in short-time increments, especially as the UN escalates or winds down its deployments. Using the Somalia mission mentioned above, at the start of 1993, the UN troops deployed to Somalia totaled fewer than 700. Yet, by November of that same year, troop levels exceeded 29,000. Changes in deployment sizes can occur quickly, and the monthly level at which the data are recorded allows for a fine-grained assessment of the effect of UN troop levels on conflict dynamics. *UN troops* thus codes the number of armed UN peacekeeping troops deployed to each host state in each month of deployment. Since PKOs are also commonly outfitted with police and military observer personnel, we include both

UN police and *UN observers* which are coded identically to *UN troops* for their respective personnel types. The addition of these variables allows us to consider the effect of various personnel types on civil war duration. These data are available for all UN PKOs from 1992 through 2011 (Kathman 2013). We have updated the data through 2014. Each of these variables is log transformed.

In addition, to better compare our results with those of prior research that examines the relationship between the presence of PKOs with the likelihood of negotiated settlements, we estimate a model using only a peacekeeping dummy in place of the three personnel variables described above. *PKO dummy* is coded 1 when peacekeepers (troops, police, or observers) are present, and it is coded 0 otherwise.

Control Variables

We control for many factors believed to affect conflict duration to negotiated solutions. First, we include traits of the conflict. Two variables measure the accumulated costs of war. *Battle deaths* is a log-transformed count of the total number of combatant casualties over time from the start of the conflict dyad. *Civilian deaths* is constructed identically, counting deaths of civilians caught in the crossfire. Both variables rely upon the Georeferenced Events Dataset (GED) (Sundberg, Lindgren, and Padskocimaite 2010; Melander and Sundberg 2013). These events-level data were aggregated to the dyad month.[11] As the accumulated costs of war rise, we expect combatants to revise downward the expected benefits of continued fighting and instead seek negotiated resolution. We also account for the past recurrence of conflict. *Prior contests* counts the number of previous conflict episodes for each dyad. We expect subsequent episodes will be more difficult to resolve via negotiation as recurrent conflict may be indicative of a significant commitment problem.

Next, we control for traits of the factions. Interventions supporting regime or rebels can yield different war outcomes (Gent 2008) and affect duration (Regan 2000; Cunningham 2010). We thus code two yearly intervention indicators in favor of the rebels (*rebel intervention*) or the government (*government intervention*). We also control for the number of rebel groups active in each conflict state (*number of rebel groups*), as research has noted the difficulty of resolving civil war as the number of groups increases (Cunningham 2006). Using data from the Non-state Actor Dataset (Cunningham, Gleditsch, and Salehyan 2013), *rebel strength* proxies each rebel group's capabilities relative to the government using a five-point ordinal coding that ranges from "much weaker to "much stronger." We expect stronger rebels to be able to exact concessions from the government, accelerating the time to agreement.[12] We also code rebel group demands. *Incompatibility* is taken from the UCDP Armed Conflict Dataset (Gleditsch et al. 2002), indicating whether each rebel group seeks control of the state or demands territorial autonomy.

Finally, we control for characteristics of the conflict country. *Population* is the log-transformed value of each state's population level as reported by the National Material Capabilities data set (Singer, Bremer, and Stuckey 1972).[13] *Democracy* is a

Table 1. Descriptive Statistics.

Variables	Mean	Standard Deviation	Minimum	Maximum
Dependent variable				
War duration (months)	61.164	70.035	1	383
Independent variables				
UN troops$_{(ln)}$	0.638	2.194	0	10.282
UN police$_{(ln)}$	0.415	1.553	0	8.615
UN observers$_{(ln)}$	0.449	1.352	0	6.947
PKO dummy	0.127	0.333	0	1
Civilian deaths$_{(ln)}$	3.029	2.161	0	8.848
Battle deaths$_{(ln)}$	5.697	2.416	0	10.959
Population$_{(ln)}$	10.611	1.605	6.230	14.110
Prior contests	1.668	1.032	1	7
Rebel strength	1.656	0.667	1	5
Number of rebel groups	6.994	4.908	1	23
Incompatibility	1.570	0.495	1	2
Democracy	0.346	0.476	0	1
Rebel intervention	0.011	0.105	0	1
Government intervention	0.139	0.346	0	1

Note: UN = United Nations; PKO = peacekeeping operation.

dichotomous indicator of whether the conflict state is democratic. This variable is coded as 1 when the state's regime score is six or higher on the Polity IV twenty-one-point scale (Marshall and Jaggers 2011). Given prior work by Walter (2002), we expect *democracy* to be associated with successfully negotiated outcomes. Descriptive statistics for the independent variables are reported in Table 1.

Model

Since we are interested in understanding the duration of civil conflict to a particular outcome, we employ a competing risks duration model. This model assesses the effect of the independent variables on the subhazard of the negotiated resolution outcome as competing with other conflict terminations. We specify negotiated outcomes according to the UCDP Termination Dataset's coding of cease-fire and formal peace agreement resolutions. The remaining termination types (government victory, rebel victory, protracted low activity, and actor ceases to exist) are the alternative conclusions to each war against which we evaluate duration to negotiated resolution.

Results and Discussion

We report the results of our analysis in Table 2. The coefficients indicate the directional effect of each covariate on the cumulative incidence of negotiated resolution,

Table 2. Competing Risks Regression Estimates (Negotiated Settlement).

Variable	Model 1	Model 2	Model 3	Model 4
	All Civil Wars	PKOs Only	All Civil Wars Including Low Activity	All Civil Wars
UN troops$_{(ln)}$	0.240** (0.086)	0.613** (0.234)	0.214** (0.070)	
UN police$_{(ln)}$	−0.319 (0.223)	−0.275 (0.217)	−0.307 (0.195)	
UN observers$_{(ln)}$	−0.056 (0.237)	−0.367 (0.218)	−0.007 (0.191)	
PKO dummy				0.094 (0.544)
Civilian deaths$_{(ln)}$	0.074 (0.093)	−0.384 (0.432)	−0.017 (0.062)	0.074 (0.091)
Battle deaths$_{(ln)}$	0.244** (0.089)	0.719* (0.282)	0.052 (0.064)	0.239** (0.091)
Population$_{(ln)}$	−0.168 (0.110)	0.121 (0.837)	−0.094 (0.069)	−0.156 (0.109)
Prior contests	−0.124 (0.119)	1.442 (1.309)	0.164** (0.051)	−0.148 (0.119)
Rebel strength	0.383 (0.212)	−1.590 (1.143)	−0.338* (0.155)	0.386 (0.204)
Number of rebel groups	0.004 (0.035)	−0.809 (0.551)	−0.005 (0.021)	−0.002 (0.035)
Incompatibility	0.132 (0.461)	24.126 (40.995)	−0.085 (0.212)	0.055 (0.457)
Democracy	0.931* (0.429)	20.318 (35.577)	0.153 (0.189)	0.921* (0.413)
Rebel intervention	−0.870 (0.654)	4.237 (2.402)	−0.878 (0.785)	−0.903 (0.623)
Government intervention	−0.420 (0.544)	−2.003 (1.280)	−0.169 (0.322)	−0.186 (0.477)
Observations	7,782	1,330	7,782	7,802
Dyads	237	34	237	237
Failures (competing)	82 (140)	13 (19)	180 (42)	82 (140)
Log pseudolikelihood	−384.418	−19.793	−820.601	−387.567

Note: Robust standard errors clustered on conflict country are in parentheses. UN = United Nations; PKO = peacekeeping operation.
*$p < .05$ (two-tailed test).
**$p < .01$ (two-tailed test).

where a positive coefficient indicates that increasing values on the independent variable increases the likelihood of a dyad episode terminating via a cease-fire or peace agreement in the following month, thus essentially shortening the duration to negotiated resolution relative to the alternative outcomes. In the opposite direction, negative coefficients reveal an extended duration to negotiated outcomes.

Model 1 in Table 2 reports the results of our competing risks model, including our peacekeeping variables and each of the controls. We report a positive and significant coefficient for *UN troops*, indicating that higher numbers of deployed blue helmets have the effect of increasing the likelihood that a given dyad episode will terminate via a negotiated settlement between the government and the rebel organization. We thus have evidence that the UN does in fact have an ability to shorten conflict duration to negotiated resolutions for those civil wars to which they send UN soldiers in increasingly large numbers. We theorize that this is the consequence of the role played by UN soldiers in resolving commitment problems and information asymmetries between the combatants and increasing the cost of continued conflict in an effort at achieving victory over the opposing side. UN police and UN observer personnel types do not report significant effects on conflict duration within the dyad. This may not be particularly surprising because police units are often deployed behind the front lines in an effort to protect the civilian population from abuse. Observers also operate behind the front lines, playing a monitoring role for political processes. However, neither police nor observers possess the extensive capabilities armed troops have to directly affect the security guarantee and information dissemination functions discussed above.

As such, troops are the only personnel type dedicated to reducing the attractiveness of pursuing a victorious outcome on the battlefield, while also improving the conditions under which the combatants can more capably pursue negotiated resolutions to conflict. Upon the intercession of large numbers of UN troops, victory is likely to become more difficult for either faction to obtain. A faction's ability to impose itself militarily upon its opponent becomes more difficult as blue helmets intercede. By monitoring the factions and sharing information on their mobilization, movement, and observable preparations for battle, UN troops reduce the expected value of the element of surprise. Further, given the common mandate for troops to protect themselves, intercession serves as a barrier to expectations of combat success. To justify pursuit of battlefield victory, a combatant must not only expect its battlefield efforts to be effective against its enemy. It must also believe that it can effectively fight around or through UN troops, something made more difficult as the size of the UN's barrier grows.

In addition to making the pursuit of victory unattractive, larger numbers of UN troops improve the appeal of negotiated resolutions. Larger troop deployments serve as a stronger signal of the UN's long-term commitment to conflict resolution. As such, the ability of the UN to follow through on security guarantees increases as the number of troops increases. The presence of larger troop contingents *during* wartime is a crucial component of making the pursuit of negotiated outcomes more attractive
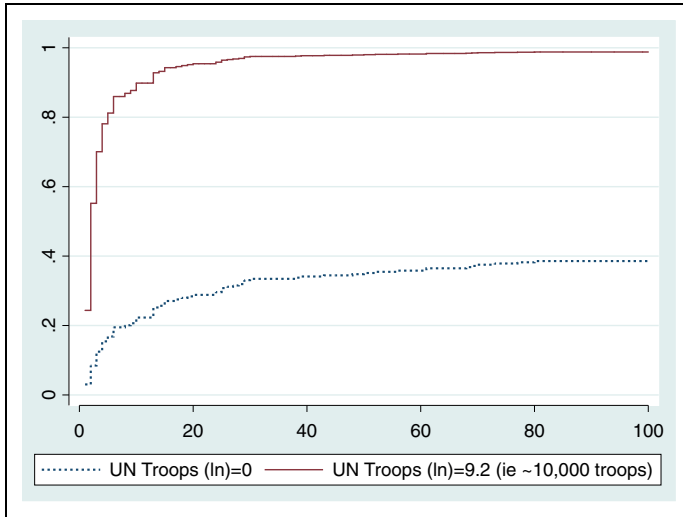
Figure 1. Cumulative incidence functions for negotiated settlement.

relative to pursuing military victory. The positive and significant coefficient for *UN troops* in model 1 is in line with this perspective on the ability of UN peacekeeping to reduce the duration of civil wars to negotiated outcomes.

To interpret this result for *UN troops* substantively, we plot cumulative incidence functions (CIFs) in Figure 1, which are generated from the results reported in model 1 while holding all other continuous variables at their mean values, ordinal controls at their medians, and categorical controls at their modes. The plotted curves in Figure 1 represent the "risk" that a negotiated settlement (reported on the *y*-axis) occurs before a given time *t* (reported on the *x*-axis) for two selected levels of UN troop deployments. The dotted line illustrates the CIF for the case in which the UN deploys no UN troops to a conflict. The mean duration of conflict episodes within government–rebel group dyads is approximately sixty-one months. With zero UN soldiers deployed, the average conflict would have a 37 percent chance of terminating in a negotiated resolution in the sixty-first month. In comparison, consider the effect of the UN sending a mission to the same hypothetical conflict. With 10,000 armed soldiers deployed (as illustrated by the solid line), the likelihood of the conflict ending in a negotiated resolution jumps dramatically to approximately 97 percent for the same time period. This is a substantial increase, indicating that peacekeeping troop deployment levels can greatly improve the prospects for conflict resolution.

An important implication of this result is that there appears to be no trade-off between the violence reducing effect of larger troop deployments and the ability of troops to shorten civil wars to negotiated outcomes. A concern mentioned above was that while previous work indicates that larger troop deployments are more effective

at reducing battlefield hostilities (Hultman, Kathman, and Shannon 2014), if larger missions also extend conflict duration, the violence reduction benefit of large operations could wash out as lower-level violence continued for longer periods. Fortunately, this does not appear to be the case.

Specifically, Hultman, Kathman, and Shannon (2014) find that moving from zero peacekeeping troops to 10,000 has the effect of reducing monthly violence from twenty-two to six deaths. A rough combination of our results with Hultman, Kathman, and Shannon provides an approximate overall effect of violence averted through peacekeeping efforts. Consider a hypothetical sample of ten civil conflict dyads that map onto the "average" dyad in our data. If no PKO troops had deployed to these conflicts, by the sixty-first month of conflict (i.e., the average duration in our data), only approximately four of these ten dyads would have ended in negotiated resolution. With 10,000 PKO troops deployed, all of the conflict dyads would be expected to conclude via negotiation by this same point.[14] Given that the CIF lines in Figure 1 flatten beyond this point, we might conclude that the six ongoing conflicts with zero PKO troops would continue to pile twenty-two combat deaths per month onto the overall death toll. If sixty-one months marked the midway point of these conflicts, the six remaining ongoing conflicts with zero PKO troops would produce 9,108 combat deaths. Yet, with 10,000 PKO troops, none of these ten conflicts would persist past sixty-one months. In this hypothetical scenario, then, committing 10,000 PKO troops to each of these ten conflict dyads would reduce total combat deaths by over 9,000.[15] This is a substantial reduction in civil war violence, offering notable support to the conflict reduction and resolution benefits of robust PKO efforts.

An examination of the difference between these two CIF curves with a 95 percent confidence interval is presented in Figure 2 with the predicted CIF on the y-axis and time on the x-axis.[16] Figure 2 illustrates that relatively quickly in the conflict time span, there is statistically significant difference between the 10,000 troop and the no troop CIFs. Given that it is relatively rare for the UN to have 10,000 troops on the ground at the beginning of a conflict onset, we suggest it is not surprising that it takes some time for there to be significant differences in predictions between the two troop levels. After this point, the difference in the impact of high levels of troops on negotiated settlements is always statistically significant and quickly moves to a 60 percent difference in CIFs.

To explore these results further, we also considered a number of additional model specifications to determine the robustness of our findings. First, one criticism of our analysis may be that if the UN deploys its missions to a biased selection of civil wars that have a higher ex ante likelihood of negotiated solutions, our results may reveal a spurious positive correlation between larger troop values and shorter wars that end in peace deals. It is worth mentioning again that much past research has found that the UN tends to select difficult cases. Applied here, difficult cases would likely not include those that are on the precipice of a durable negotiated solution just prior to a PKO's arrival. One, albeit imperfect, way to address this concern is to limit our
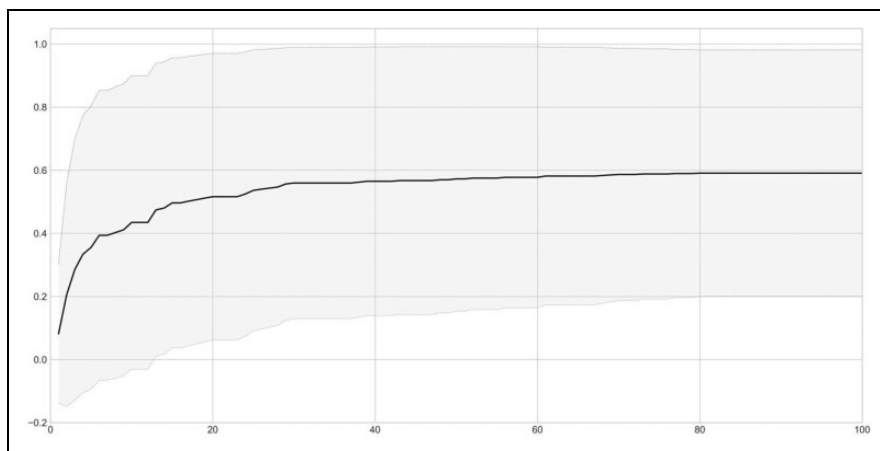
Figure 2. Difference in expected cumulative incidence functions (CIF) curves with ∼10,000 United Nations (UN) troops and 0 UN troops. Figure shows mean difference in CIF curves shown in Figure 1, with 95 percent confidence intervals, based on block bootstrapping with 1,000 tests.

sample to only those conflicts that experienced a PKO at some point in the course of conflict. By so doing, we effectively remove the concern over selection of "easy" or "hard" cases. Rather, conflicts with PKO deployments are analyzed only against one another. Model 2 reports these results. Our UN personnel results mirror those in model 1. While police and observer personnel again have no significant effect, larger numbers of troops deployed to operations shorten the duration of civil war to negotiated conclusions. In other words, when we compare PKOs to one another, those PKOs with more troops tend to be more successful.

Second, it may be that we should not judge operational effectiveness myopically on the achievement of a negotiated solution to conflict. It may be that mission effectiveness should be defined more simply as reducing the level of battlefield hostilities to very low levels such that conflict functionally ceases. Ending conflict via low activity can be an initial first step toward concluding a successful peace accord. It may therefore be reasonable to consider the reduction of violence below twenty-five deaths to be an outcome associated with mission effectiveness, even if a negotiated resolution is not yet achieved by the point of conflict termination as recognized by the data.[17] We thus respecified our model to assess both negotiated settlements (cease-fire and peace agreements) in tandem with a dwindling of violence short of an agreement (low activity) as the general class of conflict cessations in competition with all others. We report the results from this specification in model 3. *UN troops* maintains its positive and significant coefficient, indicating a shortening of civil wars to negotiated and low-activity outcomes as the number of PKO troops increases.[18]

Finally, we recognize that some previous research has questioned the role of UN peacekeeping in effectively confronting ongoing conflict (Beardsley 2012; Greig and Diehl 2005). As we note above, we believe that a distinguishing characteristic of our work relative to previous studies is our focus on the size of PKO troop commitments as a reflection of mission capacity to make effective security guarantees. Dichotomous measures of a mission's presence or absence would not account for these important mission nuances. To further investigate this distinction, model 4 serves as a replication of model 1 by removing the three UN personnel variables and replacing them with a dichotomous indicator of a mission's presence (1) or absence (0) in a given conflict dyad. Consistent with our expectation and with previous research, this variable produced an insignificant coefficient, thus indicating that the mere presence of a UN mission is not associated with the shortening of civil wars toward negotiated resolution. This result matches with the previous research mentioned above and provides further evidence that disaggregating peacekeeping missions by their personnel capacities reveals consequential differences among PKOs and within them over time.

In addition to our primary results, several control variables report significant results in Table 1. First, *battle deaths* reports a positive and significant coefficient in models 1, 2, and 4, indicating that as battle deaths sustained by the rebel and government forces accumulate over the course of a conflict, the factions are increasingly likely to seek negotiated solutions to the conflict. This result may be an indicator that as costs mount, the expected value of victory declines, thus motivating the combatants to seek solutions to their political dispute via means other than open hostilities. However, this does not seem to be the consequence of accumulated civilian casualties, as *civilian deaths* yields an insignificant coefficient.

Rebel strength reports a positive and significant coefficient in model 2. As rebels become stronger, they may opt to continue fighting as an alternative to negotiated settlement. However, we are hesitant to place too much weight in this result, given the sample limitation of model 2 and this variable's insignificance in models 1, 3, and 4. *Democracy* is also positive and significant in models 1 and 4. Democratic states may be more prone to pursue peaceful conflict resolutions through legal processes, given that democratic states have a more fully institutionalized norm of resolving disputes through legal or diplomatic channels than do nondemocratic regime types. Finally, *prior contests* reports a positive and significant coefficient in model 3 indicating that combatants move more swiftly to negotiated outcomes when they have fought in previous iterations. The remaining variables failed to reveal a significant relationship with conflict duration to negotiated resolutions.

Conclusions

This article finds that higher levels of UN peacekeeping troops are associated with a shortening of civil wars to negotiated settlement. We argue that peacekeeping missions are able to provide actors with the security guarantees necessary to pursue

negotiated ends to civil war in good faith. Peacekeeping troop deployments facilitate this outcome by effectively separating the combatants on the battlefield, increasing the cost of continued conflict, credibly committing to security guarantees in order to overcome combatant commitment problems, sharing information on belligerent capabilities and activities, and subsequently disarming and demobilizing the forces into the post-conflict political environment. These mission efforts have the effect of increasing the attractiveness of negotiated resolutions to the parties, improving the environment in which negotiations can occur effectively, and decreasing the appeal of pursuing alternative outcomes.

We depart from previous research is two important ways. First, we evaluate PKOs in active conflict, noting that PKOs are most commonly deployed to ongoing civil wars. Second, we argue that not all UN operations are equally capable in pursuing these goals. Rather, robustly constituted missions with a substantial troop deployment are more fully capable of serving the operational functions necessary for successful conflict resolution. The absence of a positive, significant relationship in prior work between peacekeeping and shortened war duration to negotiated settlements, we suggest, is largely due to a focus on the presence, rather than the capacity, of deployed PKOs. Increasingly, peacekeeping missions are seen as unique operations with particular abilities to mitigate violence in civil conflicts (Diehl 2008). By accounting for the wide variation within and across operations, this article is able to assess whether larger troop deployments can help pacify ongoing hostilities. Indeed, when we analyze the effect of a simple dichotomous operationalization of peacekeeping presence, we find, as do Greig and Diehl (2005), that there is no significant relationship between peacekeeping and negotiated outcomes. Only when the dynamic number of peacekeeping troops is accounted for in our models are we able to discern how mission capabilities help to speed the path to resolution.

The policy implications are heartening. While recent research has indicated that more robustly constituted UN missions are able to mitigate the level of violence in active civil conflicts, past research has not yet revealed an ability of UN PKOs to shorten the duration of active conflicts. This article fills a notable gap in our knowledge of peacekeeping effectiveness because the overall destructiveness of civil war is not simply a product of conflict intensity at any given point in time. Rather, the aggregate costs of war are a product of accumulated destruction wreaked over the course of a conflict's duration. Given that even substantial peacekeeping deployments do not cause contemporaneous civil war hostilities to abate entirely (Hultman, Kathman, and Shannon 2014), it is important to ensure that UN troop deployments do not inadvertently delay the peaceful resolution of the war, causing low-level hostilities to accumulate to produce significant aggregate destruction over time.

Our results are encouraging in this regard. We find no evidence of a trade-off in the effect that peacekeeping deployments have on the level of contemporaneous violence and the duration of conflict to negotiated solutions. Rather, it appears that larger troop deployments have a consistent effect on these two important elements of

the conflict process: more troops reduce ongoing hostilities while also shortening war duration to negotiated resolution.

As a matter of policy, our results also largely reify what many of the permanent five members of the Security Council and the UN Department of Peacekeeping Operations have explicitly pursued as the approach to peacekeeping in recent years. Namely, our work supports the idea that the UN should more robustly outfit its peacekeeping missions with large numbers of troops if it wishes to mitigate civil war hostilities and reduce the destructiveness of ongoing conflicts. Doing so should reduce both the hostility and intractability of civil conflict.

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Supplemental Material

Supplemental material is available for this article online.

Notes

1. See Chapter 1 of Hultman, Kathman, and Shannon (2019) for a fuller case comparison of UN missions similar to that which is provided here.
2. For a review of this literature, see Fortna and Howard (2008).
3. We note also that "the UN is increasingly likely to be a subsidiary actor" in civil conflicts and "need not necessarily lead a peace process" to produce a positive outcome (Boutellis 2014, 738). Thus, even when the United Nations (UN) does not lead mediation efforts, peacekeepers can help provide the conditions that lead to negotiated settlements.
4. The fact that peacekeepers are tasked with information provision and security guarantee activities is documented throughout UN Security Council resolutions that create and expand peacekeeping operations (PKOs). A coding of all resolutions (initial and subsequent) on PKOs deployed to active civil wars illustrates that nearly 91 percent of operations were directed to provide informational and monitoring activities, 75 percent were tasked with security operations to protect vulnerable groups, and 47 percent were mandated with disarmament activities.
5. There are a number of additional differences between Beardsley's (2012) and Greig and Diehl's (2005) research and our own. For instance, the type of peacekeeping efforts assessed by Beardsley includes those conducted by the UN itself in addition to other multinational efforts, whereas we study only UN PKOs. Beardsley also assesses a coding

of "compromise" outcomes that are a more general class of resolutions relative to our focus on cease-fires and peace agreements. Notably, Greig and Diehl study a separate temporal domain that has little overlap with our own. As a result, their sample largely includes first- and second-generation PKOs rather than the more robust operations that developed after the Cold War. Our analyses cover the post–Cold War period.

6. Police and observer personnel serve multiple important functions within PKOs, such as patrolling the civilian population and monitoring and reporting combatant behavior toward civilians, respectively. However, these tasks are often carried out behind the front lines and are thus not clearly linked to the conflict processes addressed here.

7. In fact, research has shown that the UN escalates its troop commitments to defend against further combat violence when particularly abusive groups become more aggressive on the battlefield (Benson and Kathman 2014).

8. In sharp contrast to successful examples was the case of Rwanda. United Nations Assistance Mission for Rwanda (UNAMIR) had a small deployment relative to UN Operation in Burundi and UN Mission in Sierra Leone that was severely reduced to only a few hundred troops while violence escalated (Howard 2008). Beardsley (2011a) suggests that the UN was not able to act as a trustee for a self-enforcing peace agreement, and the lack of sufficient UN troop support resulted in disastrous consequences.

9. Some of the dyad episodes are lost to missing observations in the data that result from different coverage by our control variables in our fully specified model.

10. This last termination type may appear to be similar to one actor in the dyad being defeated. However, this outcome is distinct from the previously listed victory of one side. For instance, an actor ceases to exist when no discernable central government can be identified or when a rebel group becomes subsumed by another (Kreutz 2010).

11. The UCDP GED has recently been extended to include all post–Cold War civil conflicts across Africa, Asia, and the Middle East. Our analyses are thus restricted to these regions. However, during this time period, the vast majority of civil wars and UN peacekeeping operations occurred in these regions.

12. This variable is coded through 2011. To avoid losing observations, and since this variable is rather time invariant, we extend it through 2014 for all rebel groups that existed in 2011 by replicating the 2011 value forward. Still, employing the 2011-truncated version of *Rebel strength* does not notably affect the result for *UN troops*.

13. These data record population values through 2007. We extend this forward through 2014, using values reported in 2007. Population levels change slowly. Our extension is thus not likely to be much different from actual population levels. Still, a robustness check limiting the analysis to 2007 does not notably affect the result for *UN troops*.

14. In this hypothetical example, for simplicity of exposition, we round the 37 percent up to four of the ten conflict dyads terminated for the case of zero UN troops deployed, and we round 97 percent up to ten of the ten dyads terminated for the deployment of 10,000 UN troops.

15. This calculation is admittedly simplistic. One such limitation of the analysis conducted above is that it does not consider the effect of PKO troop deployment size as affecting the duration of conflict to the remaining civil war termination types. We have run competing risk models for each of the remaining types individually. However, *UN troops* is only

significantly related to rebel and government victory outcomes: larger troop deployments extend the duration to victory outcomes. The substantive effect of 10,000 troops is comparatively small, reducing the likelihood of termination in the sixty-first month from approximately 18 percent to 1 percent for government victory and 2.3 percent to 0.3 percent for rebel victory. Thus, the above calculations are likely to overestimate the hostility reduction effect of larger troop deployments, though not substantially. Even so, an attractive element of this exercise is the combination of substantive results from related research programs in an effort to reveal the cumulative effects of a policy option for civil conflict management.

16. The Stata version 14 and Python code used to calculate this curve and confidence interval are available at https://github.com/michelle-benson.

17. This inclusive coding of peacekeeping effectiveness may be attractive in technical terms. The UCDP Termination Dataset (Kreutz 2010) codes wars as having ended due to low activity if combat has not yielded at least twenty-five deaths in a given calendar year while the factions maintain the ability to engage in hostilities. Thus, if negotiations have not progressed sufficiently to be codified in a joint resolution, a low-activity termination may be coded in our data even if a negotiated resolution may be achieved at some more distant date. Thus, the peace achieved via low activity may be a precursor to a formally negotiated outcome while not sufficiently qualifying as such in the data.

18. We also reconsidered model 2 by including low-activity terminations in tandem with negotiated resolution outcomes. The results were the same.

References

Beardsley, Kyle. 2011a. *The Mediation Dilemma*. Ithaca, NY: Cornell University Press.

Beardsley, Kyle. 2011b. "Peacekeeping and the Contagion of Armed Conflict." *Journal of Politics* 73 (4): 1051-64.

Beardsley, Kyle. 2012. "UN Intervention and the Duration of International Crises." *Journal of Peace Research* 2 (12): 335-49.

Benson, Michelle, and Jacob D. Kathman. 2014. "UN Bias and Force Commitments in Civil Conflicts." *Journal of Politics* 76 (2): 350-63.

Berman, Eric G., and Melissa T. Labonte. 2006. "Sierra Leone." In *Twenty-first-century Peace Operations*, edited by William J. Durch, 141-228. Washington, DC: US Institute of Peace and the Henry L. Stimson Center.

Boot, Max. 2000. "Paving the Road to Hell: The Failure of UN Peacekeeping." *Foreign Affairs* 79 (2): 143-48.

Boutellis, Arthur. 2014. "United Nations Operation in Burundi (ONUB)." In *The Oxford Handbook of United Nations Peacekeeping Operations*, edited by Joachim A. Koops, Thierry Tardy, Norrie MacQueen, and Paul D. Williams, 731-41. Oxford, UK: Oxford University Press.

Brandt, Patrick T., T. David Mason, Mehmet Gurses, Nicolai Petrovsky, and Dagmar Radin. 2008. "When and How the Fighting Stops: Explaining the Duration and Outcome of Civil Wars." *Defense and Peace Economics* 19 (6): 415-34.

Cunningham, David E. 2006. "Veto Players and Civil War Duration." *American Journal of Political Science* 50 (4): 875-92.

Cunningham, David E. 2010. "Blocking Resolution: How External States Can Prolong Civil War." *Journal of Peace Research* 47 (2): 115-27.

Cunningham, David E., Kristian Skrede Gleditsch, and Idean Salehyan. 2013. "Non-state Actors in Civil War: A New Dataset." *Conflict Management and Peace Science* 30 (5): 516-31.

DeRouen, Karl, Jr. 2012. "The Role of the UN in International Crisis Termination, 1945-1994." *Defense and Peace Economics* 14 (4): 251-60.

DeRouen, Karl, Jr., Jacob Bercovitch, and Paulina Pospieszna. 2011. "Introducing the Civil Wars Mediation (CWM) Dataset." *Journal of Peace Research* 48 (5): 663-72.

DeRouen, Karl, Jr., and Ishita Chowdhury. 2018. "Mediation, Peacekeeping and Civil War Peace Agreements." *Defence and Peace Economics*, 29 (2): 130-46.

Diehl, Paul F. 2008. *Peace Operations*. Cambridge, UK: Polity Press.

Diehl, Paul F., and Daniel Druckman. 2010. *Evaluating Peace Operations*. Boulder, CO: Lynne Rienner.

Diehl, Paul F., Jennifer Reifschneider, and Paul R. Hensel. 1996. "United Nations Intervention and Recurring Conflict." *International Organization* 50 (4): 683-700.

Fearon, James D. 1995. "Rationalist Explanations for War." *International Organization* 49 (3): 379-414.

Fearon, James D. 2004. "Why Do Some Civil Wars Last So Much Longer Than Others?" *Journal of Peace Research* 41 (3): 275-301.

Fortna, Virginia Page. 2004. "Does Peacekeeping Keep Peace? International Intervention and the Duration of Peace after Civil War." *International Studies Quarterly* 48 (2): 269-92.

Fortna, Virginia Page. 2008. *Does Peacekeeping Work? Shaping Belligerents' Choices after Civil War*. Princeton, NJ: Princeton University Press.

Fortna, Virginia Page, and Lise Morjé Howard. 2008. "Pitfalls and Prospects in the Peacekeeping Literature." *Annual Review of Political Science* 11:283-301.

Gent, Stephen. 2008. "Going in When It Counts: Military Intervention and the Outcome of Civil Conflicts." *International Studies Quarterly* 52 (4): 713-35.

Gilligan, Michael, and Stephen J. Stedman. 2003. "Where Do the Peacekeepers Go?" *International Studies Review* 5 (4): 37-54.

Gilligan, Michael J., and Ernest J. Sergenti. 2008. "Do UN Interventions Cause Peace? Using Matching to Improve Causal Inference." *Quarterly Journal of Political Science* 3:89-122.

Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Håvard Strand. 2002. "Armed Conflict 1946-2001: A New Dataset." *Journal of Peace Research* 39 (5): 615-37.

Greig, J. Michael, and Paul Diehl. 2005. "The Peacekeeping-peacemaking Dilemma." *International Studies Quarterly* 49 (4): 621-45.

Greig, J. Michael, and Paul Diehl. 2007. "Softening Up: Making Conflicts More Amenable to Diplomacy." *International Interactions* 32 (4): 355-84.

Greig, J. Michael, and Paul F. Diehl. 2012. *International Mediation*. Malden, MA: Polity Press.

Harbom, Lotta, Erik Melander, and Peter Wallensteen. 2008. "Dyadic Dimensions of Armed Conflict, 1946-2007." *Journal of Peace Research* 45 (5): 697-710.

Hartzell, Caroline A. 2006. "Structuring the Peace: Negotiated Settlements and the Construction of Conflict Management Institutions." In *Conflict Prevention and Peace-building in Post-war Societies: Sustaining the Peace*, edited by J. Meernik and T. D. Mason, 31-52. London, UK: Routledge Press.

Hegre, Havard. 2004. "The Duration and Termination of Civil War." *Journal of Peace Research* 41 (3): 249-52.

Holt, Victoria K., and Tobias C. Berkman. 2006. *The Impossible Mandate*. Washington, DC: The Stimson Center.

Holt, Victoria K., Glyn Taylor, and Max Kelly. 2009. *Protecting Civilians in the Context of UN Peacekeeping Operations: Successes, Setbacks, and Remaining Challenges*. New York: United Nations.

Howard, Lise Morje. 2008. *UN Peacekeeping in Civil Wars*. Cambridge, UK: Cambridge University Press.

Hultman, Lisa, Jacob D. Kathman, and Megan Shannon. 2013. "United Nations Peacekeeping and Civilian Protection in Civil Wars." *American Journal of Political Science* 57 (4): 875-91.

Hultman, Lisa, Jacob D. Kathman, and Megan Shannon. 2014. "Beyond Keeping Peace: United Nations Peacekeeping Effectiveness in the Midst of Fighting." *American Political Science Review* 108 (4): 737-53.

Hultman, Lisa, Jacob D. Kathman, and Megan Shannon. 2016. "United Nations Peacekeeping Dynamics and the Duration of Post-civil Conflict Peace." *Conflict Management and Peace Science* 33 (3): 231-49.

Hultman, Lisa, Jacob D. Kathman, and Megan Shannon. 2019. *Peacekeeping in the Midst of War*. Oxford, UK: Oxford University Press. Forthcoming.

Jones, Bruce D. 1999. "Military Intervention in Rwanda's Two Wars." In *Civil Wars, Insecurity, and Intervention*, edited by B. Walter and J. Snyder, 116-45. New York: Columbia University Press.

Jones, Bruce D. 2001. *Peacemaking in Rwanda: The Dynamics of Failure*. Boulder, CO: Lynne Rienner.

Kathman, Jacob D. 2013. "United Nations Peacekeeping Personnel Commitments 1990-2011." *Conflict Management and Peace Science* 30 (5): 532-49.

Kathman, Jacob D., and Reed M. Wood. 2011. "Managing Threat, Cost, and Incentive to Kill: The Short- and Long-term Effects of Intervention in Mass Killings." *Journal of Conflict Resolution* 55 (5): 735-60.

Kathman, Jacob D., and Reed M. Wood. 2016. "Stopping the Killing during the 'Peace': Peacekeeping and the Severity of Post-conflict Civilian Victimization." *Foreign Policy Analysis* 12 (2): 149-69.

Kreutz, Joakim. 2010. "How and When Armed Conflicts End: Introducing the UCDP Conflict Termination Dataset." *Journal of Peace Research* 47 (2): 243-50.

Kydd, Andrew. 2005. *Trust and Mistrust in International Relations*. Princeton, NJ: Princeton University Press.

Kydd, Andrew. 2006. "When Can Mediators Build Trust." *American Political Science Review* 100 (3): 449-62.

Kydd, Andrew. 2010. "Rationalist Approaches to Conflict Resolution and Prevention." *Annual Review of Political Science* 13:101-21.

Marshall, Monty, and Keith Jaggers. 2011. "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2010." Accessed March 3, 2016. http://www.systemicpeace.org/polity/polity4.htm.

Mason, T. David, J. P. Weingarten, and P. J. Fett. 1999. "Win, Lose, or Draw: Predicting the Outcome of Civil Wars." *Political Research Quarterly* 52 (2): 239-68.

Melander, Erik, and Ralph Sundberg. 2013. "Introducing the UCDP Georeferenced Event Dataset." *Journal of Peace Research* 50 (4): 523-32.

Melin, Molly, and Isaac Svennson. 2009. "Incentives for Talking: Accepting Mediation in International and Civil Wars." *International Interactions* 35 (3): 249-71.

Ngaruko, Floribert, and Janvier D. Nkurunziza. 2005. "Civil War and Its Duration in Burundi." In *Understanding Civil War Evidence and Analysis*, edited by Paul Collier and Nicholas Sambanis, 35-62. Washington, DC: The World Bank.

Novosseloff, Alexandra. 2015. "United Nations Operation in Cote D'Ivoire (UNOCI)." In *The Oxford Handbook of United Nations Peacekeeping Operations*, edited by Joachim A. Koops, Norrie MacQueen, Thierry Tardy, and Paul D. Williams, 707-19. Oxford, UK: Oxford University Press.

Powell, Robert. 1999. *In the Shadow of Power, States and Strategies in International Politics*. Princeton, NJ: Princeton University Press.

Powell, Robert. 2004. "Bargaining and Learning While Fighting." *American Journal of Political Science* 48 (2): 344-61.

Powell, Robert. 2006. "War as a Commitment Problem." *International Organization* 60 (1): 169-203.

Powell, Robert. 2012. "Persistent Fighting and Shifting Power." *American Journal of Political Science* 56 (3): 620-37.

Pruitt, Dean G., and Paul Olczak. 1995. "Approaches to Resolving Seemingly Intractable Conflict." In *Conflict, Cooperation and Justice*, edited by Barbara Bunker and Jeffrey Rubin, 59-92. San Francisco, CA: Jossey Bass Press.

Regan, Patrick M. 2000. "Third-party Interventions and the Duration of Intrastate Conflicts." *Journal of Conflict Resolution* 46 (1): 55-73.

Regan, Patrick M., Richard W. Frank, and Aysegul Aydin. 2009. "Diplomatic Interventions and Civil War: A New Dataset." *Journal of Peace Research* 46 (1): 135-46.

Ruggeri, Andrea, Han Dorussen, and Theodora-Ismene Gizelis. 2016. "On the Frontline Every Day? Subnational Deployment of United Nations Peacekeepers." *British Journal of Political Science* 1:1-21.

Ruggeri, Andrea, Theodora-Ismene Gizelis, and Han Dorussen. 2013. "Managing Mistrust: An Analysis of Cooperation with UN Peacekeeping in Africa." *Journal of Conflict Resolution* 57 (3): 387-409.

Singer, J. David, Stuart Bremer, and John Stuckey. 1972. "Capability Distribution, Uncertainty, and Major Power War, 1820-1965." In *Peace, War, and Numbers*, edited by Bruce Russett, 19-48. Beverly Hills, CA: Sage.

Sisk, Timothy D. 2009. *International Mediation in Civil Wars: Bargaining with Bullets*. London, UK: Routledge Press.

Smith, Michael G., and Moreen Dee. 2006. "East Timor." In *Twenty-first-century Peace Operations*, edited by William J. Durch, 389-466.Washington, DC: US Institute of Peace and the Henry L. Stimson Center.

Sundberg, Ralph, Mathilda Lindgren, and Ausra Padskocimaite. 2010. *UCDP GED Codebook Version 1.0-2011*. Uppsala, Sweden: Department of Peace and Conflict Research, Uppsala University.

Thyne, Clayton L. 2009. *How International Relations Affect Civil Conflict: Cheap Signals, Costly Consequences*. Lexington, MA: Lexington Books.

UN (United Nations). 1999. "The Situation in East Timor." United Nations Security Council Resolution S/RES/1272, UN, New York.

UN (United Nations). 2005. "Sierra Leone: A Success Story in Peacekeeping." United Nations Peace Operations Year in Review, United Nations Department of Public Information, UN, New York.

UN (United Nations). 2007. "'We Should All Be Proud' of Peacekeeping Achievements, But Must Also Address Failings, Says Deputy Secretary-general to New York Meeting." United Nations Press Release from the Office of the Deputy Secretary-General, September 4: DSG/SM/334-PKO/168, UN, New York. Available at: https://www.un.org/press/en/2007/dsgsm334.doc.htm.

UN (United Nations). 2011. "Twenty-eighth Report of the Secretary-General on the United Nations Operation in Cote d'Ivoire." United Nations Security Council: S/2011/387, UN, New York.

Wagner, Harrison. 2000. "Bargaining and War." *American Journal of Political Science* 44 (3): 469-84.

Walter, Barbara F. 1997. "The Critical Barrier to Civil War Settlement." *International Organization* 51 (3): 335-64.

Walter, Barbara F. 2002. *Committing to Peace: The Successful Settlement of Civil Wars*. Princeton, NJ: Princeton University Press.

Zartman, William I. 1993. "The Unfinished Agenda: Negotiating Internal Conflict." In *Stop the Killing: How Civil Wars End*, edited by Roy Licklider. New York: New York University Press.

Zartman, William I., and Saadia Touval. 1985. "International Mediation: Conflict Resolution and Power Politics." *Journal of Social Issues* 41 (2): 27-45.