Nationality, Gender, and Deployments at the Local Level: Introducing the RADPKO Dataset

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ABSTRACT

This paper introduces the Robust Africa Deployments of Peacekeeping Operations (RADPKO) dataset, a new dataset of geocoded United Nations peacekeeping deployments. Drawing upon primary documents sourced directly from the UN covering 10 multidimensional peacekeeping operations from 1999 to 2018, RADPKO offers comprehensive monthly time-series data on UN peacekeeper deployment location by type, gender, and nationality. We describe the data collection in detail and discuss the cases and time periods missing from the data. We show that although the UN responds dynamically to conflict events in the field, deployments outside of population centres tend to be fairly homogeneous in regard to both nationality and gender. We use this data to empirically investigate the oft-posited link between deployment of peacekeepers and reductions in violence at the local level. We replicate and extend past studies but find that some previous findings are vulnerable to robustness checks, primarily due to data incompleteness. Our analysis suggests the importance of data collection transparency, management, and description to the quantitative study of peacekeeping. The data, updated annually, provides new opportunities for scholar conducting micro-level research on peacekeeping, conflict, development, governances, and related topics across subfields in Political science.

Introduction

With over 100, 000 peacekeepers deployed to 14 countries and an annual budget exceeding $6 billion USD, United Nations peacekeeping operations provide the international community a potentially powerful tool for stabilization. Cross-national research finds that UN peacekeepers bring conflicts to an end,[1] increase duration of peace,[2] and reduce armed group victimization.[3]

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 Supplemental data for this article can be accessed at https://doi.org/10.1080/13533312.2020.1738228
[1]Doyle and Sambanis, *Making War and Building Peace.*
[2]Fortna, *Does Peacekeeping Work?*
[3]Hultman, Kathman, and Shannon, "United Nations Peacekeeping."
This article has been republished with minor changes. These changes do not impact the academic content of the article.

Yet single-case studies cast doubt upon these claims.[4] Which perspective is correct?

We suggest that disagreements in existing scholarship are due to an empirical levels-of-analysis-problem and divergent sampling strategies. While single-case studies highlight the local pathologies within the UN's most 'difficult' missions, cross-national studies either examine the impact of peacekeeping at the *state-level* or investigate the effect of peacekeeping on an incomplete sample of 'easier' deployments.[5] The latter approach potentially mutes variation in peacekeeping that manifests only at the local level, and the former approach potentially mischaracterizes peacekeeping effectiveness in the aggregate. Comprehensive data on the precise location and composition of peacekeeping forces within countries would help link these contrasting approaches. With these data, cross-national studies could better characterize how the local dynamics of peacekeeping detected in single-case studies generalize across a coherent sample of missions.

This paper introduces the Robust Africa Deployments of Peacekeeping Operations (RADPKO) dataset, which provides the link between cross-national peacekeeping deployments and the local level of analysis explicitly. RADPKO is an original database of all sub-Saharan peace-keeping deployments authorized under a Chapter VII mandate from the UN Security Council from 1999 to 2018: multidimensional missions that focus on building peace from the bottom-up in the most-fragile contexts. Unlike previous efforts, we (1) rely on primary documents collected from the UN Department of Peace Operations (DPO) to track deployments across our sample; (2) structure the data in both grid form and at the second-order administrative level; (3) include information on gender of peacekeepers; (4) disaggregate peacekeepers by type (police, troops, military observers); (5) provide troop data on a monthly rather than quarterly basis. In brief, our data offer researchers accessible and granular information about the location, size, type, nationality, and self-reported gender of UN peacekeepers from 1999 to 2018 that is usable on its own or in conjunction with other datasets.

Our data provides new opportunities for scholars conducting research on peacekeeping, conflict, governance, development, or related topics across subfields in Political Science. To demonstrate the utility of the RADPKO data, we offer a brief set of analyses. We descriptively document the systematic deployment of peacekeepers to violent areas, confirming the intuition that estimates of peacekeeping effectiveness likely contain some degree of selection bias.[6] Our descriptive analyses also illustrate systemic

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[4]Autesserre, *Peaceland*; Costalli, "Does Peacekeeping Work?"; and Mvukiyehe and Samii, "Subtle Micro-Effects of Peacekeeping."
[5]Howard, *Power in Peacekeeping*.
[6]Fortna, *Does Peacekeeping Work?*; Gilligan and Sergenti, "Do UN Interventions Cause Peace?"; and Ruggeri, Dorussen, and Gizelis, "On the Frontline Every Day?"

deployment patterns with regard to the nationality and gender of peace-keepers. We show that while multidimensional peacekeeping deployments display some degree of gender balancing, many deployments do not rely on multinational units outside of densely populated urban centres. These descriptive findings have important implications for our understanding of the mechanisms through which peacekeepers deploy, operate, and succeed.

We also use the new RADPKO data to provide a new perspective on UN peacekeeping effectiveness. Existing research has found that UN peacekeeping reduces levels of civilian victimization.[7] We question the robustness of these findings. While we are able to replicate the negative relationship between UN troops and rebels' use of violence against civilians on a subset of missions active from 2000 until 2011, this results either washes out or is reversed when we use the entire sample of missions included in the RADPKO data. Moreover, we find that both UN police and UN troops are positively correlated with the onset of government-perpetrated violence against civilians. Our empirical application of the RADPKO dataset suggests a more cautious interpretation of peacekeeping effectiveness in the aggregate.

We conclude with a discussion of potential future work, paying particular attention to causal inference, the importance of identity and gender of peace-keepers, and incorporating the data into broader studies of peacekeeping deployment.

Data and Measures

Research on UN peacekeeping has boomed in the past two decades. Recent reviews have highlighted the growth of both peacekeeping theories and empirical applications.[8] Since the publication of Severine Autesserre's land-mark studies on micro-level peacebuilding,[9] scholars have also been paying increasing attention to how peacekeeping operations work on a localized level.[10] Scholars have shown that localized peacekeeping patrols provide criti-cal information to maintain stability in these contexts,[11] contribute to counter-insurgency campaigns,[12] bolster the domestic rule of law,[13] support

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[7]Hultman, Kathman, and Shannon, "United Nations Peacekeeping."

[8]Fortna and Howard, "Pitfalls and Prospects"; Diehl, "Behavioural Studies of Peacekeeping"; Autesserre, "Going Micro"; and Di Salvatore and Ruggeri, "Effectiveness of Peacekeeping Operations." For a compre-hensive review, see ongoing work by Kroeker, Meiske, and Ruggeri, "State of Art UN Peace Operations."

[9]Autesserre, The Trouble with the Congo; and Autesserre, Peaceland.

[10]Ruggeri, Dorussen, and Gizelis, "Winning the Peace Locally"; and Fjelde, Hultman, and Nilsson, "Protec-tion Through Presence."

[11]Gordon and Young, "Cooperation, Information, and Peace"; and Duursma, "Information Processing Challenges."

[12]Hunnicutt and Nomikos, "UN Peacekeeping at the Local-Level"; and Duursma, "Obstruction and Intimidation."

[13]Blair, "International Intervention."

the perceived legitimacy of the state[14] and help enforce interethnic cooperation.[15]

Yet despite renewed interest in UN operations at the micro-level, political scientists lack a comprehensive dataset of UN peacekeeping operations conducted at the local level. A special issue of *International Peacekeeping* edited by Govinda Clayton described the state-of-the-art with regard to peacekeeping data.[16] As part of this issue, Han Dorussen and Andrea Ruggeri discuss the PKOLED and PKODEP datasets, which jointly identify the time and subnational location of UN Peacekeeping deployments from 1989 to 2006 in Africa.[17] Along with Theodora-Ismene Gizelis, they use these data to analyse the effectiveness of UN peacekeeping operations at the local level during this time period.[18] Similarly, Hanne Fjelde, Lisa Hultman, and Desireé Nilsson collect data on the time and subnational location of UN peacekeepers deployed to prevent civilian victimization in 9 African countries from 2000 to 2011,[19] extended to 2014 in work with Deniz Cil.[20] Yet these previous efforts to collect local-level data tend to be incomplete, imprecise, or both.

Our dataset represents an improvement in the quality of data on local-level peacekeeping for three reasons. First, our data encompasses solely and entirely the scope of multidimensional UN peacekeeping operations with the authority to patrol at the local level. Second, our data offer precise estimates of the UN peacekeeping deployments in Africa. Specifically, we use primary data on country-level force contributions sourced directly from the Department of Peace Operations, updated monthly. Third, our data provide previously unavailable fine-grained information on peacekeepers disaggregated by type, nationality, and gender. With an eye toward replication, we worked to confirm, refine, and expand upon existing data. This section describes these efforts in detail.

Data Collection

Data Sources and Collection Strategy

For every Chapter VII peacekeeping mission deployed to sub-Saharan African from 1999 to 2018, our goal is to record base-level estimates of UN peacekeeping personnel deployed per contributing country, disaggregated by their personnel type (e.g. police, military observer, or troops) and gender.[21] To do this,

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[14]Stollenwerk and Nomikos, "More Security, More Legitimacy?"
[15]Nomikos, "Peacekeeping and Enforcement."
[16]Clayton et al., "Known Knowns and Known Unknowns."
[17]Dorussen and Ruggeri, "Peacekeeping Event Data."
[18]Ruggeri, Dorussen, and Gizelis, "Winning the Peace Locally."
[19]Fjelde, Hultman, and Nilsson, "Protection Through Presence."
[20]Cil et al., "Mapping Blue Helmets."
[21]More information on our data collection process, including two additional case studies and an in-depth discussion of the assumption we make in distributing personnel across units, can be found in the Online Appendix.

Table 1. MONUC June 2001, units per base.

Base	Units (total)	Contributing countries (units)
Kinshasa	3	South Africa (1), Tunisia (1), Multinational (2)
Mbandaka	3	Uruguay (1), Senegal (1), Multinational (1)
Kananga	2	Senegal (1), Multinational (1)
Kalemie	2	Uruguay (1), Multinational (1)
Goma	2	Morocco (1), Multinational (1)
Kisangani	2	Morocco (1), Multinational (1)
Other	1	Multinational (1)

we rely on two archival documents from the UN Department of Peace Operations (DPO). First, we use deployments maps available periodically in mission reports to the Secretary General to identify the complete set of active peacekeeping bases and to generate the count of peacekeeping 'units' per nationality deployed at each base in a given month. Using the June 2001 MONUC deployment map as a running example (see Figure A2), we would record these base-level counts as listed in Table 1.

Second, we use monthly deployment reports from DPO to generate contributing country-level counts of peacekeeping personnel by type and gender for all active Chapter VII missions. Again, using MONUC's June 2001 deployment as an example we would record the following, listed in Table 2.

To generate base-level counts of peacekeepers deployed by nationality, personnel type, and gender, we next match the contributing country-level counts of peacekeeping personnel to bases where the same contributing country has active units. To determine how many personnel from a contributing country's total deployment are allocated to different bases, we calculate the proportion of a contributing country's total count of units that are located at each active base (see Table 3).

We then multiply these proportions by the contributing-country-level count of personnel deployed per type and gender to estimate the base-level count of peacekeepers per contributing country in each mission-month. Our estimates for June 2001 are listed in Table 4.

Contribution and Comparison to Other Data

RADPKO offers uniquely precise estimates of peacekeeping contributions at the local level for at least three reasons. First, using the regularly published mass deployment reports from the DPO allows us to track the gender of deployed peacekeepers. Existing data rely on map symbology from deployment maps listed in the back of UN reports of the Secretary General to approximate the size of deployed peacekeeping units.[22] Information about gender of peacekeepers cannot be deduced from symbology on UN deployment maps and is not available in other datasets.

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[22]Ruggeri, Dorussen, and Gizelis, "Winning the Peace Locally"; Fjelde, Hultman, and Nilsson, "Protection Through Presence"; and Cil et al., "Mapping Blue Helmets."

Table 2. MONUC June 2001, personnel per contributing country.

Contributing country	Personnel (total)	Personnel (by type)
Morocco	618	618 troops
Senegal	566	554 troops, 12 military observers
South Africa	96	95 troops, 1 military observer
Tunisia	243	224 troops, 19 military observers
Uruguay	444	420 troops, 24 military observers
Multinational	388	81 troops, 307 military observers

Table 3. MONUC June 2001, proportion of total units per base.

Contributing country	Kinshasa	Mbandaka	Kananga	Kalemie	Goma	Kisangani	Other
Morocco	–	–	–	–	0.5	0.5	–
Senegal	–	0.5	0.5	–	–	–	–
South Africa	1	–	–	–	–	–	–
Tunisia	1	–	–	–	–	–	–
Uruguay	–	0.5	–	0.5	–	–	–
Multinational	0.07	0.04	0.04	0.04	0.04	0.04	0.04

Second, relying exclusively on map symbology to estimate the number of personnel units contain first ignores how unit size may vary in different contexts. For instance, a company of Bangladeshi troops deployed in Sierra Leone may be significantly smaller than a company of Bangladeshi troops deployed in Mali given the different operational constraints each context implies. Second, the symbology-based estimation technique risks generating incorrect estimates of unit size per contributing country each time actual unit size does not perfectly match symbology-based standards for unit size: 10 troops per squad, 35 troops per platoon, 150 troops per company, 650 troops per battalion, and so on. Ex-ante, we have no intuition about when these standards will lead to over or underestimates of actual deployment levels and lack qualitative evidence suggesting that Chapter VII missions adhere strictly to these standards when deploying troops. In fact, audits of ongoing peacekeeping missions suggest that deployed units commonly are understaffed, implying a

Table 4. MONUC June 2001, personnel estimates per base.

Base	Personnel total	Contributing country (personnel by type)
Kinshasa	367	South Africa (95 troops, 1 military observer), Tunisia (224 troops, 1 military observer), Multinational (6 troops, 22 military observers)
Mbandaka	469	Uruguay (210 troops, 12 military observers), Senegal (227 troops, 6 military observers), Multinational (3 troops, 11 military observers)
Kananga	247	Senegal (227 troops, 6 military observers), Multinational (3 troops, 11 military observers)
Kalemie	236	Uruguay (210 troops, 12 military observers), Multinational (3 troops, 11 military observers)
Goma	323	Morocco (309 troops), Multinational (3 troops, 11 military observers)
Kisangani	323	Morocco (309 troops), Multinational (3 troops, 11 military observers)
All remaining bases	14	Multinational (3 troops, 11 military observers)

constant but immeasurable degree of uncertainty in the symbology-based estimates of personnel. Our data instead use exact counts of deployed peacekeepers per contributing country, type, and gender to estimate peacekeeper force size subnationally.

Third, and most importantly, we contend that our data better capture the temporal variation in the UN's deployment of peacekeepers subnationally. No other dataset uses reports on *monthly* force contributions to estimate the number of peacekeepers deployed per active contributing country for each mission. The DPO infrequently publishes mission reports of the Secretary General that are publicly accessible and contain updated deployment maps.[23] Relying on deployment maps alone to estimate deployment statistics therefore likely overlooks changes in peacekeeping deployment that occur monthly, perhaps in response to the specific needs of a given mission. For this reason, other existing data cannot capture variation in the number of peacekeepers deployed during months in which a mission does not publicly file a report of the Secretary General containing a deployment map. Our data are able to capture variation in peacekeeping force contributions at the local level during the many months in which deployment maps are not available. We find this feature of our data particularly important given the dynamic nature of Chapter VII peacekeeping deployments, which we detail below.

In Online Appendix A, we compare RADPKO's estimates of peacekeeping contributions to estimates of peacekeeping contributions available in another data collection effort.[24] Overall, we identify the scenarios in which we are certain that RADPKO provides the most precise estimates of base-level peacekeeping contributions and further elaborate on why our data offer the most realistic snapshot of peacekeeping deployments available.

Variables and Versions of the Dataset

The UN deploys three types of non-civilian personnel to post-conflict areas: military troops, police, and military observers. Military troops are peacekeepers that are actively patrolling the front lines of conflict settings, often interacting with armed groups. Police (UNPOL) conduct operations behind front lines, interacting almost exclusively with civilians to ensure that local disputes do not escalate. Military observers (UNMO) are primarily engaged in monitoring and verification activities. Our data includes variables that subdivide total peacekeeping force contributions by personnel type, gender, and nationality. Table 7 provides a summary of the sampled Chapter VII peacekeeping deployments along these dimensions. We produce two versions of the dataset. In line with previous work,[25] we divide each state into 0.5×0.5 decimal degree grids with

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[23]A summary of this missingness can be found in the Online Appendix.
[24]Cil et al., "Mapping Blue Helmets."
[25]Ruggeri, Dorussen, and Gizelis, "Winning the Peace Locally"; and Fjelde, Hultman, and Nilsson, "Protection Through Presence."

month as the temporal unit of analysis. We then aggregate peacekeeping deployments within each grid cell. Previous approaches have advocated that the spatial grid cells present a unit of analysis that is not endogenous to conflict processes, reduces the degree of measurement error present in the dependent variable, and recognizes the spatial and temporal dynamics of conflict. The grid version of the dataset has the added advantage of being readily merge-able with all data available from PRIO's Uppsala Conflict Data Program.[26]

We also aggregate the data up to our preferred unit of analysis: a country's second-order administrative unit (ADM2). We advocate for this approach for three reasons. First, aggregating up to a country's second-order administrative unit lowers the effort required for scholars to apply RADPKO to studies of other phenomenon pertinent to stabilization. Off the shelf, our data can be merged easily with social protest event data,[27] indicators of development and resource use,[28] indicators of rebel group exploitation of natural resources,[29] and the Afrobarometer.

Second, we argue that second-order administrative boundaries too are plausibly exogenous to current conflict dynamics. These boundaries typically are colonial, formed prior to the onset of current conflict processes. Violent events in our sample frequently cross these boundaries over time. We suggest that this spillover indicates that the presence of conflict itself is not bounded by our unit of analysis.

Third, using a country's second-order administrative unit as the unit of analysis better reflects the spatial logic of UN peacekeeping deployments and the nature of UN peacekeeping patrols. Using a 0.5×0.5 grid cell as the primary unit of analysis restricts the effective area within which deployed peacekeepers can operate to 3000 km2, approximately. This may prove a tenable assumption for peacekeeping missions deployed to relatively small countries such as Sierra Leone (UNAMISL), but unnecessarily restricts the reach of peacekeepers attached to missions deployed in larger countries such as the Democratic Republic of Congo (MONUC/MONUSCO). Using a country's second-order administrative unit does not impose this same restriction. Statistically, our method of aggregation allows for peacekeepers based in a second-order administrative unit's capital city – e.g. Timbuktu and Gao in Mali – to correlate with the frequency and nature conflict events occurring in the same unit's outlying towns and villages. These outlying towns and villages plausibly fall within peacekeepers' areas of operation, particularly considering how peacekeepers frequently are deployed to ADM2-capitals due to their centrality and access to passable road networks.[30]

[26]Tollefsen, Strand, and Buhaug, "PRIO-GRID."
[27]Salehyan et al., "Social Conflict in Africa."
[28]Goodman et al., "Geoquery: Integrating HPC Systems."
[29]Walsh et al., "Funding Rebellion."
[30]Ruggeri, Dorussen, and Gizelis, "On the Frontline Every Day?"

Table 5. Data comparison.

	RADPKO: ADM2	RADPKO: Grid	Fjelde et al. (2019): Grid
Sample frame	1999–2018	1999–2018	2000–2011
Treated units	214	270	214
Control units	398	2857	2173
Mean PKO deployment	792	598	Not in replication data
Mean troop deployment	695	525	522
Mean police deployment	90	70	Not in replication data

Columns A and B of Table 5 compare both versions of our data to highlight the points outlined above. Across both version of our data, the spatial unit of analysis has a slight effect on the estimated count of peacekeepers, both in total and by personnel type. Selecting a country's second-order administrative unit consistently produces deployment estimates that are larger than those produced using the PRIO-grid structure. This discrepancy likely arises because aggregating along a country's second-order administrative unit captures a larger number of individual peacekeeping bases per month than does the PRIO-grid structure.

The selected spatial unit of appears to have little effect on the number of estimated 'treated' units: spatial units wherein some type of PKO personnel were stationed during a mission's tenure. However, aggregating deployment estimates using the grid structure produces significantly more 'control' units: spatial units where no PKO personnel were staged during a mission's tenure. We attribute this discrepancy to the large number of grid cells which fall within a treated second-order administrative unit but do not contain individual peacekeeping bases; and thus remain untreated in the grid version of the data. Figure 1 illustrates this discrepancy and provides some visual intuition as to its occurrence using RADPKO data for peacekeepers deployed to Mali.
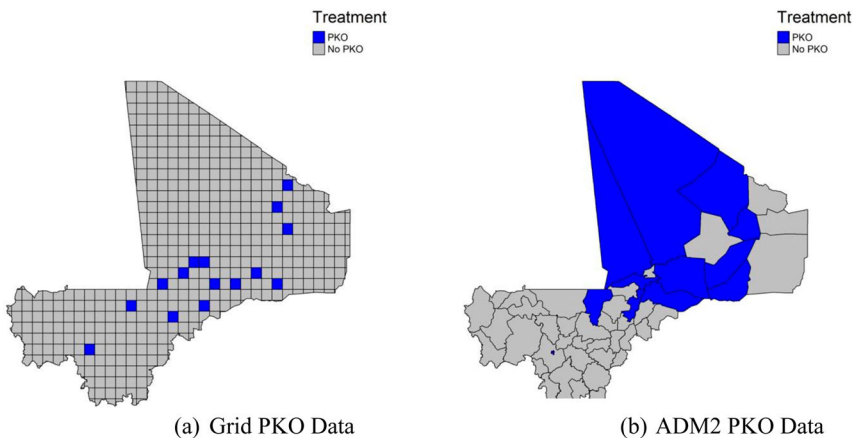

(a) Grid PKO Data   (b) ADM2 PKO Data

Figure 1. MINUSMA: grid vs. ADM2 data. (a) Grid PKO data. (b) ADM2 PKO data.

Table 6. Sampled UN-PKOs.

Mission	State (region)	Mission dates	Data coverage
UNAMISL	Sierra Leone	October 1999–June 2006	October 1999–November 2005
MONUC	Democratic Republic of Congo	November 1999–Ju1y 2010	January 2000–Jul 2010
UNMIL	Liberia	September 2003–March 2018	Sep 2004–June 2017
UNOCI	Cote d' Ivoire	April 2004–June 2017	August 2004–July 2014
ONUB	Burundi	May 2004–December 2006	April 2005–November 2006
UNMIS	Sudan	Mar 2005–July 2011	September 2005–July 2011
UNAMID	Sudan (Darfur)	July 2007–Present	July 2014–December 2017
MINURCAT	Chad	September 2007–December 2010	April 2009–November 2010
MONUSCO	Democratic Republic of Congo	July 2010–Present	July 2010–December 2017
UNMISS	South Sudan	July 2011–Present	November 2012–December 2017
MINUSMA	Mali	April 2013–Present	March 2014–December 2017
MINUSCA	Central African Republic	February 2014–Present	May 2015–December 2017

We provide the RADPKO data in both spatial formats to maximize their flexibility. Ultimately, we leave individual researchers to select their preferred unit of analysis.

Data Coverage and Missingness

Our sample covers the time period from 1999 until 2018 (see Table 6). We provide unique observations for each month during this period for each one of the peacekeeping operation for the length of the mission or 2018, whichever comes first. Annual updates by our research lab will ensure that the RADPKO data continues to be available up until the most recent year of UN peacekeeping deployments. Our data begins with the year 1999 to capture entirely the scope of multidimensional UN peacekeeping operations with the authority to patrol at the local level. This coincides roughly with the publication of the Report of the Panel on United Nations Peace Operations, also known as the Brahimi Report.[31] This report explicitly called for peacekeeping operations to focus on localized patrols. Although the recommendations from the report were not adopted until November 2000, the UN had begun to implement local-level peacekeeping reforms in Sierra Leone as early as 1999.[32] It is for this reason we begin our data collection with Sierra Leone (UNAMISL).

Our focus is exclusively robust or multidimensional peacekeeping operations for which the UN Security Council has provided a Chapter VII mandate. Past research relies on samples that combine UN peacekeeping missions across mandates, equivocating traditional deployments with ones designed to intervene at the local level. Blurring this distinction has clear empirical implications.

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[31]Brahimi, *Report of the Panel.*
[32]Bellamy, Williams, and Griffin, *Understanding Peacekeeping.*

Figure 2. Countries w/sampled UN-PKOs.

To capture the effect of peacekeeping on local conflict dynamics accurately, we must make comparisons among missions with the Chapter VII operational mandate to conduct local patrols and more-freely intervene in local conflict. Including non-Chapter VII peacekeeping missions may compromise this assessment, given previous limitations placed on peacekeepers' use of force to prevent violent disruptions of the political process and the purposeful targeting of civilians. We map the sampled countries in Figure 2. Table 6 offers a temporal cross-section and coverage of our data. Notably, we are missing data for each mission in our sample. This missingness stems directly from the availability of deployments maps published in mission-specific reports of the Secretary General. As such, we are only able to include updated information on the location and composition of deployed peacekeeping units for months in which missions publish a report of the Secretary General containing a

Table 7. Descriptive statistics, RADPKO dataset.

	PKO (count, mean)	Troops (%, mean)	Police (%, mean)	Observers (%, mean)	Female PKO (%, mean)	Contributing countries (count, mean)
ONUB	142.50	0.95	0.01	0.03	–	1.26
MINURCAT	260.94	0.92	0.07	0.01	0.04	1.04
UNOCI	260.95	0.86	0.12	0.02	0.01	1.61
UNMIL	288.93	0.86	0.12	0.01	0.04	1.60
UNMIS	338.58	0.83	0.11	0.05	0.09	1.40
MONUC	407.51	0.91	0.04	0.05	0.04	1.43
UNMISS	473.17	0.89	0.10	0.01	0.05	1.71
MONUSCO	671.11	0.91	0.07	0.03	0.03	1.88
MINUSCA	683.94	0.84	0.15	0.02	0.02	1.93
MINUSMA	754.02	0.89	0.11	0.00	0.02	2.92
UNAMSIL	767.05	0.97	0.01	0.02	–	2.74
UNAMID	1218.58	0.78	0.21	0.01	0.05	3.13
UNISFA	4012.80	0.97	0.00	0.03	0.07	23.01
Total	479.31	0.87	0.11	0.02	0.04	1.86

Notes: Data on the gender of peacekeepers only is available from November 2009 until present. UN mass deployment reports only disaggregated deployment statistics by mission, contributing country, and personnel type prior to November 2009. Therefore, we are unable to provide estimates of the number of female peacekeepers deployed on average for ONUB and UNAMISL, both of which concluded prior to November 2009. We also cannot estimate the average number of female peacekeepers deployed over the complete period of deployment for missions which began prior to remained active past November 2009 (e.g. UNMIL).

deployment map. This implies that, for any mission, we are missing data from (1) the months prior to the first published Secretary General report containing a deployment map and (2) the months between the publication of each subsequent deployment map in the Secretary General reports.

We unfortunately cannot resolve either point of missingness using publicly available documents from UN DPO. Instead, our data make two assumptions: first, that the first publicly available deployment map for a mission is representative of the location and composition of peacekeeper deployment from the establishment of the missions; and second, that the location and composition of peacekeepers for a mission remains static in the months spanning the publication of reports of the Secretary General with updated deployment maps.[33] We contend that all available data on the subnational deployment of peacekeeping forces face these same limitations, since previous data collection efforts relied solely on these reports to estimate subnational deployment statistics. An additional discussion of data missingness can be found in the Online Appendix.

Descriptive Statistics and Comparison with Other Data

We provide some basic descriptive statistics of the ADM2 structure of our dataset in Table 7. For each mission, we specifically calculate the mean level of deployment along a number of dimension among 'treated' second-order

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[33]Our overall count of deployed PKO personnel is updated monthly because we use mass deployment reports from DPO.

administrative units: districts wherein a peacekeeping base was located at some point over a mission's tenure.

Perhaps the most striking feature of the data is the consistency of deployments across missions. Aside from three notable outliers – deployments in Burundi (ONUB), Darfur (UNAMID), and Abyei (UNISFA) – robust UN peacekeeping deployments appear remarkably similar despite operating in different environments. On average, the UN appears to deploy between 250 and 750 peacekeepers per second-order administrative unit.

At first glance, the composition of active peacekeepers appears quite similar along three dimensions across each mission in our sample. First, UN troops make up the bulk of each deployment. On average, UN troops constitute at least 78% of deployed personnel per second-order administrative unit in a given month. Second, UN military observers make up a very small proportion of deployed personnel – on average, 4% – per second-order administrative unit-month. This trend comports with our understanding of how the UN deploys small teams of military observers to conflict zones in the months preceding the full deployment of a Chapter VII peacekeeping mission. Finally, UN deployments appear fairly homogeneous in terms of their diversity. We average the count of unique contributing countries represented by active personnel per second-order administrative unit in a given month to roughly approximate diversity. Aside from one clear outlier, the UN's ongoing deployment in Abyei (UNISFA), personnel represent only between one and three contributing countries on average.

These consistencies aside, there are two domains in which UN peacekeeping at the local level varies considerably: UN police deployment and gender balance. In comparison to more recent deployments in Darfur (UNAMID) and Mali (MINUSMA), ONUB, MONUC, UNAMISL, and UNISFA stand out for their limited use of UN police. This is likely due to the fact that the UN deployed ONUB mostly to monitor the end of violence for a short time, thus necessitating a small force. Additionally, MONUC and UNAMISL deployed in the early years of the Brahimi Report recommendations emphasizing increased UN police presence, and UNISFA personnel are deployed specifically to separate conflict actors in the contested Abyei region separating Sudan and South Sudan.

There also exists some variation between missions with regard to the deployment of female peacekeepers. Of note are the two operations for which we do not record any female peaceckeepers: ONUB and UNAMISL (see note for Table 7). Overall, our data suggest that actual gender balance of UN peacekeeping deployments even in the most balanced operations – for instance, UNMISS – falls well below UN targets.

Table 5 also provides cross-sections of our data in relation to the most current and publicly available data on the subnational deployment of peacekeepers (see column C). A few points of comparison are worth noting. First,
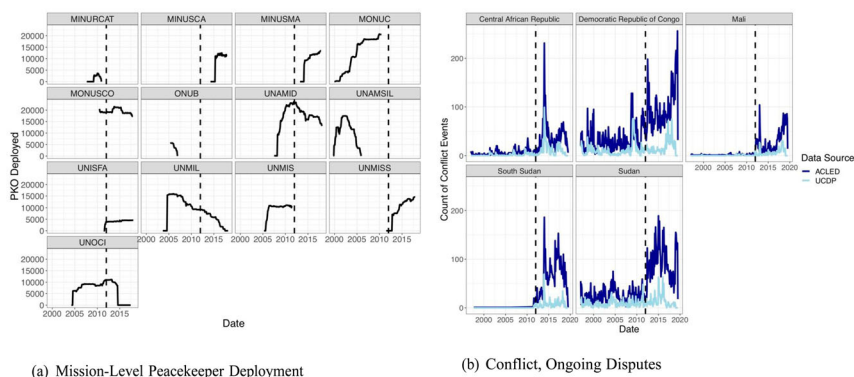
(a) Mission-Level Peacekeeper Deployment

(b) Conflict, Ongoing Disputes

Figure 3. Deployment, conflict levels over extended sampling frame. (a) Mission-level peacekeeper deployment. (b) Conflict, ongoing disputes.

Note: The vertical black dashed line marks the end of the sampling frame previous data collection efforts use. All deployment and conflict statistics to the right of the dashed line indicate data points fall exclusively in our sampling frame.

our data provide a publicly available count of peacekeepers, both in the aggregate and disaggregated by personnel type. We offer these data in multiple versions to ease the burden on researchers who wish to incorporate RADPKO data into existing analyses. Second, our data offer a larger temporal cross-section of UN peacekeeping deployments compared to previously published data, despite our sole focus on peacekeeping missions with Chapter VII mandates. Figure 3 shows the additional deployment of peacekeepers our data capture using our sampling frame which extends through 2018.[34] One empirical implication of our extended sampling frame is clear: our data provide previously unavailable subnational deployment statistics for the UN's more recent and most 'difficult' peacekeeping missions. Of the twelve total Chapter VII peacekeeping missions deployed in sub-Saharan Africa, two had not begun – MINUSCA in the Central African Republic and MINUSMA in Mali – and three had only just begun in earnest – UNISFA in Abyei, MONUSCO in the Democratic Republic of Congo, and UNMISS in South Sudan – by the end of 2011.

Our extended sampling frame is particularly important in light recent conflict dynamics among countries with active Chapter VII peacekeeping deployments (see Figure 3(b)). For instance, consider how levels of conflict have changed in the Darfur region of Sudan, where peacekeepers have been deployed as part of UNAMID since August of 2007. During the novel period of our sampling frame – from January 2012 until January 2018 – second-order administrative units experienced approximately 5.5 conflict events per

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[34]At the time of publication, other efforts to collect data on the subnational deployment of peacekeepers have, to the best of our knowledge, extended their samples through 2014.

month, on average. In the same period, nearly 5000 conflict events occurred in total. Compare these statistics to those spanning the eight-year period from the beginning of conflict in Darfur until December 2011; during which approximately 1600 conflict events occurred in total and second-order administrative units experienced approximately three conflict events a month, on average. Relying on peacekeeping data which only captures deployment levels prior January 2012 therefore is likely to generate an inaccurate evaluation of how peacekeepers have impacted levels of violence in Darfur, both since beginning of UNAMID in 2007 and in more recent years.

Data on the subnational location and composition of UN peacekeepers is an essential tool analysts rely on the assess the effectiveness of peacekeeping at large. Our data provide the most expansive version of this tool to date. Not only do our data allow scholars and practitioners alike to investigate novel aspects of Chapter VII peacekeeping missions such as the role of identity; they also provide a more complete snapshot of peacekeeping deployments than do previously available data.

The Data: Patterns of UN Peacekeeping Deployments

Patterns of UN peacekeeping deployments matter for practitioners and academics alike. For policymakers, granular descriptions of deployments could help alleviate monitoring problems and reform current peacekeeping practices. For political scientists, rich description is essential for teasing out the treatment assignment process driving the subnational deployment of peacekeepers. Being able to precisely characterize where and under what conditions peacekeepers are deployed can help us minimize estimation errors due to selection bias.

The UN Selects into Violence

We first use our data to investigate where and when UN peacekeepers deploy within countries. Our findings are in line with what Ruggeri et al. call an 'instrumental logic' (that peacekeepers deploy in order to contribute to conflict resolution) rather than a 'logic of convenience' (that peacekeepers deploy to safe areas where the risk of attack is low).[35] We also do not find evidence of a large temporal lag between violence and deployment, *conditional on the deployment of the peacekeeping operation as a whole*. However, we leave a systematic analysis of subnational deployment for future work using these data.

Descriptively, our data suggest that in many cases UN peacekeepers are deployed to areas that have experienced higher levels of violence. Moreover, we find evidence suggesting a preemptive logic of deployment at the outset of peacekeeping missions. For instance, violence in Mali before UN

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[35]Ruggeri, Dorussen, and Gizelis, "On the Frontline Every Day?"

(a) Pre-Deployment Violence
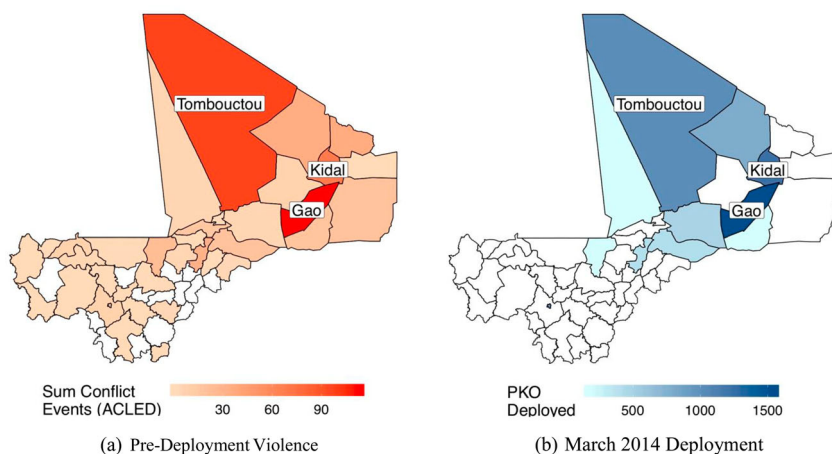
(b) March 2014 Deployment

Figure 4. UN selects into violence, Mali. (a) Pre-deployment violence. (b) March 2014 deployment.

deployment was particularly severe in three ADM2 districts – Tomboctou, Kidal, and Gao. Subsequently, the UN deployed the greatest number of peacekeepers to those three districts both in the first month of deployment and over the duration of the mission (see Figure 4).

The UN also deployed a significant amount of peacekeepers to the next three most violent districts – Tessalit, Ménaka, and Douentza. However, the UN sent fewer peacekeepers to those three areas relative to the three most violent areas of Mali, suggesting that the UN responds in kind to security threats. As more specific evidence of these reactive deployments, we document an increase in peacekeeper deployment to the Tomboctou district in Mali from 1250 peacekeepers in May 2015 to 1600 in June to 2200 in July (see Figure 5). Over the same period, there were six conflict events in the Tomboctou district, five involving UN peacekeepers. In reports published during this period, UN officials expressed concern about these attacks and formally requested a greater number of troops to Mali in general and Tomboctou specifically.[36] These reports suggest that these UN troop increases in Tombouctou reflect an explicit concern with the stability of the Malian state .[37]

Gender Balancing and Diversity in UN Peacekeeping

Our data also can be used to shed light on patterns of UN deployment that often are overlooked. For instance, we find suggestive evidence that the UN does not uniformly deploy multinational contingents of peacekeepers

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[36]United Nations Security Council, *Report of the Secretary-General.*
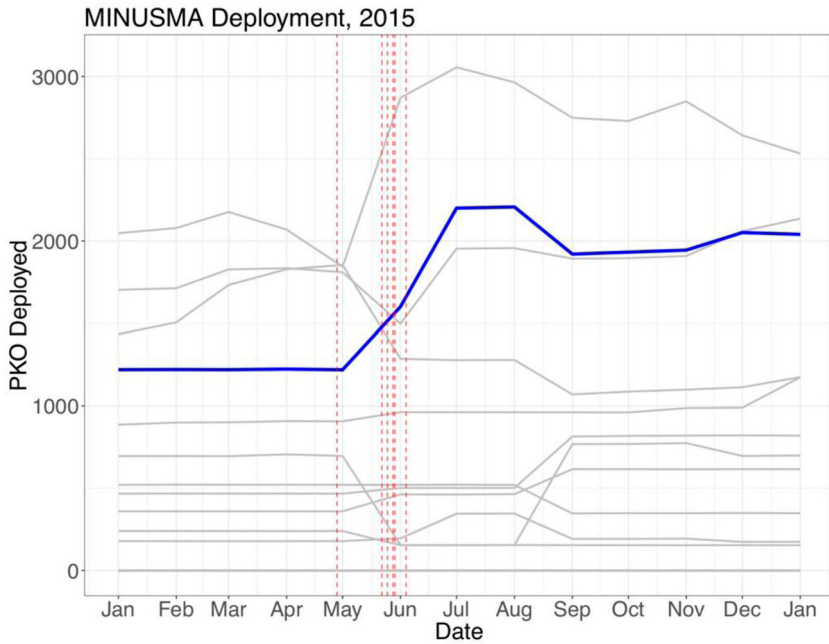[37]Ibid.

Figure 5. MINUSMA reactive deployment Tomboctou, Mali.

Note: Vertical red lines mark dates of violent events involving MINUSMA troops, as recorded in the ACLED database. Faded grey lines track the deployment of UN peacekeepers to other treated ADM2-units in Mali; the single blue line tracks the number of peacekeepers deployed in Tombouctou cercle.

outside of major population centres, contrary to conventional wisdom. For example, consider the cross-section of our data in Liberia visualized in Figure 6(a). The UN's largest deployment in Monrovia was fairly multinational, including peacekeeping units from at least eight separate contributing countries. However, in almost all other operational sectors, peacekeeping was a fairly unilateral affair, relying on Nigerian, Bangladeshi, *or* Pakistani forces. We see a similar pattern in Mali (see the Online Appendix). In contrast, the UN mission in South Sudan contains a more diverse set of peacekeeping bases outside of the country's capital, Juba (see the Online Appendix). These findings suggest that UN deployments differ across urban and rural environments[38] and across missions.

We also find that the gender balance of UN peacekeeping deployments is fair on average, but does vary by personnel type and across missions. Although some districts receive no female peacekeepers or police (for example, the Salala district in Liberia, highlighted red in Figure 6(b)), the majority of local peacekeeping missions deploy some female peacekeepers.

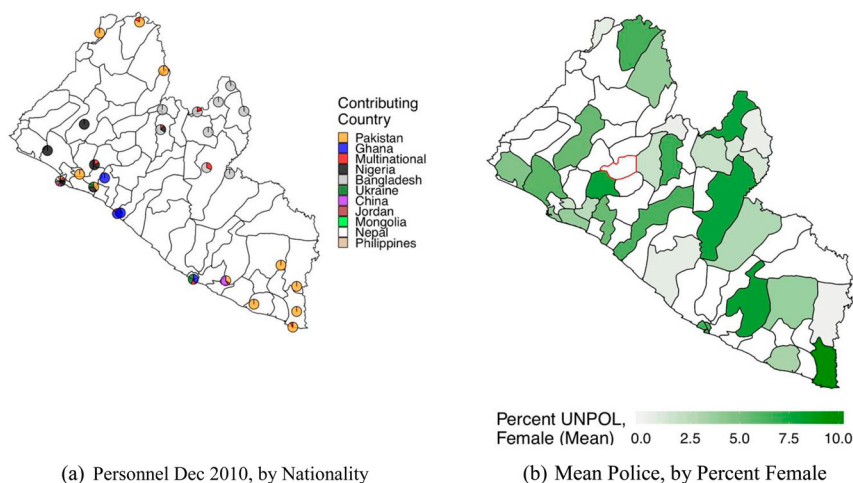[38]Nomikos, "Do Residents of Conflict Settings."

Figure 6. UN deployments to Liberia (UNMIL). (a) Personnel December 2010, by nationality. (b) Mean police, by per cent female.

Moreover, female peacekeepers are not limited to urban bases. For example, we find that the most gender-balanced units in Liberia are located outside of the country's capital, Monrovia. This aligns with the research of Sabrina Karim and her colleagues on the importance of female police in rural Liberia. Nonetheless, we find evidence of a gendered protection norm and rigid gender roles in UN peacekeeping deployments.[39] Specifically, women consistently play a smaller role in UN troop contingents than they in policing operations (see the Online Appendix for examples of this pattern in Mali and South Sudan).

Application: UN Peacekeeping Effectiveness at Local Level

Does UN peacekeeping reduce violence at the local level? While previous scholarship finds that UN peacekeepers reduce levels of civilian victimization and the duration of conflict at the local level, this relationship has not been explored for more recent peacekeeping operations and different types of peacekeepers.[40] We investigate whether local peacekeeping deployment reduces the onset of civilian victimization, a critical outcome of interest for the both the UN and the peacekeeping scholarship.[41] In this way, we apply the RADPKO dataset and showcase its potential utility for an important question to peacekeeping scholars.

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[39]Karim and Beardsley, *Equal Opportunity Peacekeeping*.
[40]Ruggeri, Dorussen, and Gizelis, "Winning the Peace Locally"; and Fjelde, Hultman, and Nilsson, "Protection Through Presence."
[41]Hultman, Kathman, and Shannon, "United Nations Peacekeeping."

Research Design

Structure of Data and Matching Procedure

We conduct our analysis on a time-series at the locality-month level using our full dataset (1999–2018). Taking advantage of the flexibility afforded to us by the structure of the RADPKO data, we use both the grid-month as well as the second-order administrative district (ADM2) as the unit of analysis.

In order to adjust for potential confounders that might be associated with both deployment of peacekeepers and onset of civilian victimization, we use the coarsened exact matching (CEM) procedure introduced by Iacus et al.[42] We match on whether a locality has received a peacekeeping 'treatment' or not to reduce imbalance on observables between localities that have had peacekeeping and those that had not. This procedure is necessary because of the selection problems inherent in UN peacekeeping, which we discussed in the previous section.

We match on variables that our own analysis, as well as previous scholarship, suggest are predictive of UN subnational deployment: logged measures of population, terrain, and travel time to major cities, in addition to the specific deployment and whether a location experienced conflict at any point in our sample. We include balance figures in our Online Appendix. This mirrors the strategy used by previous scholarship.[43]

Dependent and Independent Variables

We operationalize civilian victimization (one-sided violence, or OSV) using comparable geocoded event data from both the Uppsala Conflict Data Program (UCDP) database[44] and the Armed Conflict Location and Event Database (ACLED).[45] We use both datasets for robustness, though we acknowledge Eck's evaluation that UCDP's 'geocoding and precision information is far superior to ACLED's'.[46] We aggregate event data on OSV by rebel groups and by governments or government-affiliated armed groups at the grid level into a binary indicator variable for each unit of analysis in our dataset. As a result, we have four separate measures for civilian victimization: (1) OSV-rebel (UCDP), (2) OSV-government (UCDP), (3) OSV-rebel (ACLED), (4) OSV-government (ACLED). We do the same aggregation procedure at the ADM2 level as well, giving us four additional measures of our dependent variable.

We operationalize UN peacekeeping presence as the lagged count of UN personnel deployed by personnel type, drawing directly from the RADPKO dataset: (1) UN peacekeeping troops, scaled to the 1000s and (2) UN

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[42]Iacus, King, and Porro, "Causal Inference without Balance Checking."
[43]Fjelde, Hultman, and Nilsson, "Protection Through Presence."
[44]Harbom, Melander, and Wallensteen, "Dyadic Dimensions of Armed Conflict."
[45]Raleigh et al., "Introducing ACLED."
[46]Eck, "In Data We Trust?"

Police, scaled to the 100s. We omit the third type of UN peacekeepers, military observers, from the analysis because of issues arising from collinearity.

Estimation Strategy

We use logistic regression models to estimate the relationship between peace-keeping and the onset of civilian victimization. We run four types of logit regressions, listed in Table 8. We run each specification for both DVs measuring one-sided violence – rebel-OSV and government-OSV. Every model has a count of UN peacekeeping troops as the main independent variable. Model 1 replicates the regressions run in Fjelde et al.[47] by segmenting our grid-based data from 2000 to 2011. Model 2 uses the same model specification as Fjelde et al.[48] but extends the data to 2018, again using the grid structure. Model 3 includes a count of UN police per locality-month as an additional independent variable using the grid structure on the full dataset (2000–2018). Model 4 also adds UN police per locality-month but uses the ADM2 structure of the RADPKO dataset. These models highlight three unique features of the data: data coverage (our data ends in 2018 rather than 2011), type (data on UN police in addition to UN troops), and structural flexibility (data is available in both grid and ADM2 form).

Because some level of imbalance on observables still exists, even after the CEM procedure, we adjust for this in our regressions by including the aforementioned set of covariates in each regression. We use robust clustered standard errors at the respective geographic unit of analysis for all regressions (either grid or ADM2).[49]

Results

We summarize the results in the form of coefficient plots in the four panels of Figure 7. Each plot point represents a beta coefficient that corresponds to the estimated size of the association between peacekeeping and one-sided violence. The accompanying error bars represent the 95% confidence intervals of each estimate. Full regression tables for each of specification are available in our Online Appendix.

We are able to replicate the two core results of Fjelde et al.[50] using the RADPKO data, trimmed to the correct subset of missions and dates, and

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[47]Fjelde, Hultman, and Nilsson, "Protection Through Presence."
[48]Ibid.
[49]In the gridded version of the dataset, CEM reduces the number of observations in our data from 298,104 to 51,856. In the ADM2 version of the dataset, CEM reduces the number of observations in our data from 31,393 to 29,042. When using the ADM2-version of RADPKO with ACLED data, CEM improves the multivariate L1 from 0.806 to 0.372. When using the ADM2-version of RADPKO with UCDP data, CEM improves the multivariate L1 from 0.807 to 0.373. When using the GRID-version of RADPKO with ACLED data, CEM improves the multivariate L1 from 0.952 to 0.297. When using the ADM2-version of RADPKO with ACLED data, CEM improves the multivariate L1 from 0.950 to 0.286.
[50]Fjelde, Hultman, and Nilsson, "Protection Through Presence."

Table 8. Model specifications.

1	2	3	4
Logit	Logit	Logit	Logit
2000–2011	2000–2018	2000–2018	2000–2018
Grid	Grid	Grid	ADM2
Troops	Troops	Troops	Troops
No police	No police	Police	Police

Notes: All four models are run using both dependent variables (one-sided violence by government actors, one-sided violence by non-state actors) and using both datasets (UCDP and ACLED).

UCDP data to measure one-sided violence (see Model 1 of top two panels, UCDP data). First, there is a negative association between deployment of peacekeeping troops and one-sided violence by rebel groups. Second, there is no statistically or substantively significant relationship between deployment of peacekeeping troops and violence by government actors.

We are unable, however, to replicate the Fjelde et al.[51] study when we use the ACLED data to measure one-sided violence (see Model 1 of bottom two panels, ACLED data). We no longer find evidence of a statistically significant relationship between deployment of peacekeepers and onset of one-sided violence by rebel groups. In addition, the sign of the coefficient has flipped – whereas there is a *negative* association when we use the UCDP data, there is a *positive* association when we use the ACLED data. Additionally, though the estimated relationship between peacekeeping deployment and one-sided violence by government actors remains statistically insignificant, the size of the confidence interval is somewhat larger.

Moreover, we are unable to replicate previous results in full once we extend the sample of missions through 2018, using the full extent of the RADPKO data (Model 2 in each panel). We find a positive correlation between peacekeeping troop deployments and one-sided violence by rebel groups. Although this relationship is not statistically significant when we use the UCDP data, it is statistically significant at conventional levels when we use the ACLED data. As before, we find a positive yet not statistically significant relationship between peacekeeping troop deployment and government one-sided violence.

Models 3 and 4 extend our analysis further by distinguishing between UN troop and police deployments using different versions of the RADPKO data. Whereas Model 3 uses a version of RADPKO where deployment estimates are aggregated to the PRIO-grid cell, Model 4 uses a version of RADPKO where deployment estimates are aggregated to countries' second-order administrative units. Although we cannot rule out a null correlation between deployments of police and troops and the onset of rebel-perpetrated one-sided violence using the gridded version of RADPKO (Model 3, left column of Figure 7), we do find evidence suggestive of two patterns using the ADM2-
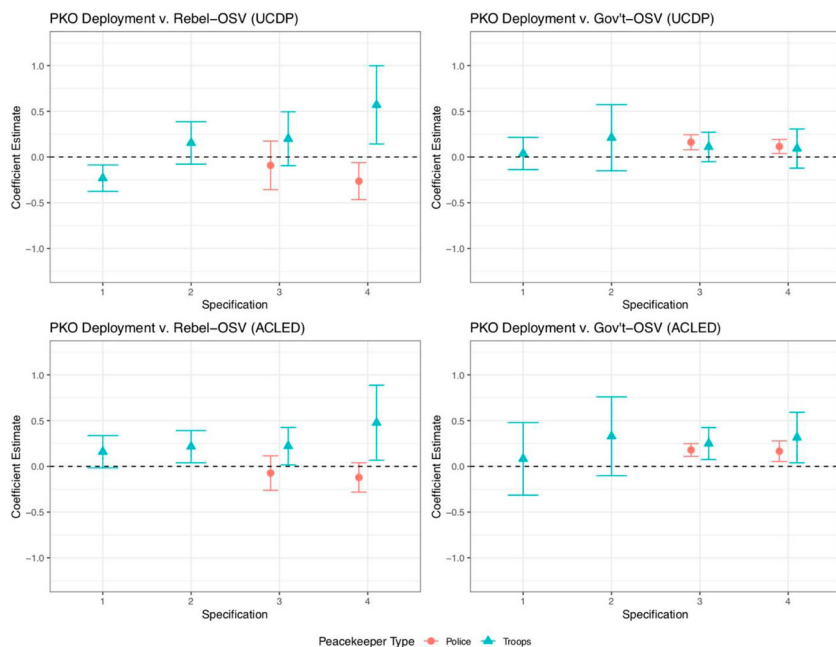
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[51]Ibid.

Figure 7. Estimated association between peacekeeping and civilian victimization.

version of the RADPKO data (Model 4, left column of Figure 7). First, there is a *negative* association between deployment of UN police and the onset of rebel one-sided violence. However, this result drops out when using ACLED data to construct our dependent variable. Second, there is a *positive* association between deployment of UN peacekeeping troops and rebel one-sided violence.

When we analyse government one-sided violence, we find evidence of a clear *positive* relationship between UN police deployment and government one-sided violence (Models 3 and 4, right column, Figure 7). This finding is robust to changes in data structure (grid or ADM2) and conflict event data (UCDP or ACLED). Less clear is the relationship between deployment of peacekeeping troops and government violence. Using data from ACLED to construct our dependent variable, we find a positive association between the deployment of additional peacekeeping troops and the onset of government one-sided violence. This results fades, though, when we use data from UCDP to estimate the onset of government one-sided violence.

Discussion

Our analyses point to three specific results regarding the local effectiveness of peacekeeping operations. First, we find limited evidence that additional UN

police are associated with a decrease in the likelihood of rebel groups targeting civilians. This result, however, is not robust to model specifications either using ACLED data to construct the dependent variable or taking the PRIO-grid cell as the spatial unit of analysis. Second, our results loosely suggest that both types of UN peacekeeping personnel are positively associated with the onset of government-perpetrated one-sided violence. The positive association between UN police and government one-sided violence is particularly robust. Third, we find some evidence indicating a positive relationship between the deployment of additional UN troops and rebel groups' use of violence against civilians. However, this positive correlation is not robust to our third model specification where we rely on UCDP data to construct the dependent variable and use the gridded version of our RADPKO data.

We partially interpret these results purely as artefacts of selection bias in light of how the UN chooses to deploy different types of personnel to different areas within a conflict zone. For instance, UN police typically are deployed behind the 'front lines' of conflict to areas where rebel groups may be less active and have fewer incentives to victimize civilians. The suggestive negative correlation between UN police and rebel one-sided violence we find therefore may simply capture how UN police predominantly are deployed to areas where rebel groups are less-likely to target civilians ex-ante. The positive association we find between UN troops and rebel one-sided violence can be interpreted similarly. UN troops are deployed to active conflict zones where rebel groups have strong strategic incentives to target civilians. The correlation our analyses uncover therefore may only be indicative of how UN troops are deployed to areas where, by definition, rebel one-sided violence occurs more frequently.

Despite the likely presence of selection bias, our results still provide suggestive evidence regarding how the unique skills different types UN personnel bring to conflict zones subsequently affects combatants' targeting of civilians. Through their patrolling and integration in local communities, UN police may provide stronger incentives for civilians to provide information on the location and activities of local rebel groups than UN troops. As a result, UN police may be better suited to prevent rebel groups from victimizing civilians than troops. Our results loosely suggest this may be the case in practice.

Our results also demonstrate how the empirical relationship between UN peacekeeping personnel and one-sided violence is sensitive to different samples of missions, model specifications, spatial units of analysis, and conflict data. Aside from the positive correlation we find between UN police and government-perpetrated one-sided violence and the positive correlation we find between UN troops and rebel-perpetrated one-sided violence, the remainder of our results are not robust. For instance, the slight positive association we find between UN troops and government one-sided violence does not persist when using conflict data from ACLED. We are also unable

to consistently reproduce the negative association between UN police and rebel one-sided violence we find using UCDP conflict data and the ADM2-version of the RADPKO data: the result fades when we use a PRIO-grid cell as our spatial unit of analyses in conjunction with conflict data from UCDP and washes out entirely when using conflict data from ACLED.[52] Finally, our results suggest that extending the sample of peacekeeping missions through 2018 effectively flips the negative association linking peacekeeping troops to rebel one-sided violence from 2001 to 2011. In part, we attribute this reversal to the increased coverage of 'difficult' peacekeeping missions, such as UNAMID in Darfur, MINUSCA in the Central African Republic, and MINUSMA in Mali, that the RADPKO data provide.

Conclusion and Avenues for Future Research

Understanding the conditions under which UN peacekeepers are deployed effectively is critical to improving international stabilization efforts. In support of this research agenda, we introduce the new RADPKO dataset. To construct this dataset, we rely on novel primary documents from the United Nations Department of Peacekeeping Operations. As a result, the RADPKO dataset comprehensively records the location, size, composition, and identity of all UN peacekeeping personnel attached to twelve Chapter VII missions active in sub-Saharan Africa from late 1999 through January 2018. Our RADPKO data allow researchers to investigate how previously under-explored dimensions of peacekeeping – e.g. gender and diversity – unfold at the local level across a complete sample of theoretically coherent missions.

To demonstrate the utility of the RADPKO dataset, we offer a brief set of analyses. First, we use the RADPKO data to substantiate claims that the UN deploys peacekeepers to violent areas. We go on to show that the Chapter VII missions appear to respond in kind to targeted attacks against peacekeeping personnel: in Mali, a series of attacks against peacekeepers in Tombouctou saw MINUSMA subsequently reinforce bases in the region. Second, we use the RADPKO data to test descriptively the claim that Chapter VII peacekeeping missions rely on more female peacekeepers and rely heavily on multinational peacekeeping units. We find that gender balancing typically is concentrated among policing units, and that the multinationality of deployed peacekeeping units decreases substantially outside of the second-order administrative units containing countries' capital cities.

Finally, we use the RADPKO data to replicate and extend previous analyses examining the relationship between UN peacekeepers and civilian victimization. While we are able to replicate the negative correlation between UN

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[52]One should be mindful of the recommendations of Eck (2012) here – it might be the case, for instance, that ACLED is not a perfect fit for this analysis.

peacekeeping troops and the onset of rebel-perpetrated one-sided violence using an appropriate subset of the RADPKO data, our additional findings question the robustness of this result as the sample of peacekeeping missions is extended. We find that UN troops are associated with a greater likelihood of rebel-perpetrated one-sided violence when using the full sample of missions included in the RADPKO dataset. We also find a consistent positive association between UN police and the likelihood that armed groups from or in support of the government will perpetrate violence against civilians.

We caution researchers' interpretation of these results, for at least two reasons. First, we show that many of the relationships between peacekeeping personnel and one-sided violence are sensitive to different sampling frames, model specifications, spatial units of analysis, and conflict data. To reiterate: among all of our results, we only can consistently rule out a null association between UN police and government one-sided violence. Second, our results likely reflect some degree of endogeneity. Given the robust patterns of UN deployment to violent areas we show descriptively, researchers should take threats to causal inference seriously – peacekeeping is likely to fall prey to significant estimation errors due to selection bias. Scholars seeking to evaluate peacekeeping effectiveness at the local level will need to consider carefully the particular determinants of peacekeeping deployments. We hope our findings and RADPKO data lay the foundations for such work.

In addition, we foresee at least two directions for future research specifically using the RADPKO dataset. First, for research on peacekeeping specifically, our data can be used to augment current efforts investigating the role of identity and gender in peacekeeping operations. For example, the work of Karim and Beardsley generates a series of testable hypotheses on the deployment of female peacekeepers.[53] On identity, Bove and Ruggeri argue that more diverse deployments reduce level of violence against civilians[54] and Haass and Ansorg argue that operations with a larger share of troops from countries with 'high-quality militaries' are more effective.[55] Future scholarship can now use the RADPKO data to investigate in depth and extend this research.

Second, more generally, our data could be used to explore new avenues of research in comparative politics, international relations, and political economy. For example, researchers might investigate how local peacekeeping operations condition the impacts of development and humanitarian aid in post-conflict states. Moreover, pairing our data with existing Afrobarometer survey responses may also yield interesting insights about the link between peace-keeping and perceptions of the state. Alternatively, our data can be merged with data from AidData's GeoQuery Tool that provides estimates

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[53]Karim and Beardsley, *Equal Opportunity Peacekeeping*.
[54]Bove and Ruggeri, "Kinds of Blue."
[55]Haass and Ansor, "Better Peacekeepers, Better Protection?"

of land cover, saturation of development projects, and other indicators of development (e.g. Nighttime Lights data). Our hope is that the RADPKO data provide researchers a low-cost method of incorporating the effect of peacekeeping into broader research on international intervention, development, and state society relations in conflict-affected settings.

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Disclosure statement

Notes on contributors

Patrick Hunnicutt is a Ph.D. candidate in the Bren School of Environmental Science and Management at the University of California, Santa Barbara. His research focuses on the intersection of questions about service provision, international aid, natural resource management, and governance in countries emerging from civil conflict.

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