The legacy of war: The effect of militias on postwar repression

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Abstract

How do wartime legacies affect repression after the conflict ends? Irregular forces support the government in many civil wars. We argue that if this link continues after the war, respect for human rights declines. As "tried and tested" agents they are less likely to shirk when given the order to repress. Governments might also keep the militias as a "fall-back option", which results in more repression. Analyzing data from 1981 to 2014 shows that pro-government militias (PGMs) that were inherited from the previous conflict are consistently associated with worse repression, but newly created ones are not. Wartime PGMs target a broader spectrum of the population and are linked to worse state violence. New militias usually supplement wartime ones and use violence primarily against political opponents. This study highlights the detrimental impact of war legacies.

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Keywords

militias, post-conflict, repression, physical integrity rights violations

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Introduction

Countries emerging from civil war are often caught in a conflict trap (e.g., Derouen and Bercovitch 2008; Hartzell, Hoddie and Rothchild 2001; Walter 2015). Even without a return to full-blown conflict, postwar societies face adverse conditions.[1] In the aftermath of civil war, countries struggle with economic recovery (e.g., Collier, Hoeffler and Söderbom 2008; Serneels and Verpoorten 2013) and development (Gates et al. 2012; Iqbal 2006). The legacy of war affects political participation (Bellows and Miguel 2009; Blattman 2009) and attitudes (Grosjean 2014; Grossman, Manekin and Miodownik 2015; Lupu and Peisakhin 2017). But we know little about drivers of state-sponsored repression after the conflict ends.

We contribute to the research agenda that aims to understand the legacies of armed conflict. Postwar governments often cannot rely on well-functioning institutions to regulate societal or political conflict (e.g., Hartzell and Hoddie 2015; Joshi 2010). At the same time, pressure on limited resources and the struggle for political influence foster tensions (e.g., Keels and Nichols 2018). Under these difficult conditions governments often resort to violence to maintain control. The question is less which countries do or do not protect basic rights to physical integrity, but rather to what extent they are violated. How can we explain variations in state-sponsored repression in post-conflict societies?

To answer this question, we argue that government strategies that are applied during the civil war and that are carried over into the postwar period help us understand such variation. We suggest that if governments collaborate and support irregular armed groups during the war and do not sever this link after the war terminated, then torture, disappearances and killings are likely to be more common compared to a scenario without such government-supported wartime militias. We concentrate on the impact of pro-government militias (PGMs) because they are a common feature of intra-state armed conflicts (Carey, Mitchell and Lowe 2013; Carey and Mitchell 2016; Jentzsch,

[1]We use the terms "post-conflict" and "postwar" interchangeably.

Kalyvas and Schubiger 2015) and associated with repression (Alvarez 2006; Campbell and Brenner 2002; Mitchell, Carey and Butler 2014; Kirschke 2000; Koren 2017). We follow Carey, Mitchell and Lowe (2013) in defining PGMs as armed groups that are not part of the regular security forces but have a link to the government (Carey, Mitchell and Lowe 2013).[2] This link can consist of personnel overlap (e.g., because the leader of the PGM has an official status within a state institution), institutional connections (e.g., because the militia is trained by the military or the militia is an armed wing of a governing political party) or direct support (e.g., because the government provides the group with weapons or payment). These groups have distinct tasks that separate them from regular security forces. For some groups this link is more formalized, while the government has a more tenuous authority over others. The former have been classified as semi-official PGMs, while the latter are usually characterized as informal militias, vigilantes or death squads.[3]

Research PGMs usually focuses on their behavior *during* civil wars (e.g., Estancona et al. 2019; Jentzsch, Kalyvas and Schubiger 2015; Koren 2017). We know little about why they might continue in the postwar period and how they influence human rights violations during that time. We bring together characteristics of the civil war and the postwar period, as they might affect postwar dynamics differently (Uzonyi and Hanania 2017).

Why would governments continue their collaboration with irregular armed groups and why would this foster repression in the postwar period? Strategic advantages for the government, as well as the trust and experience developed during the preceding conflict, the difficulties of disarming militias and the personal motivation of militiamen

[2]For an overview of the literature on pro-government militias in civil wars, see Carey and Mitchell (2016).

[3]For a more detailed discussion of pro-government militias, see Carey, Mitchell and Lowe (2013) and Carey and Mitchell (2017).

heighten the risk of postwar state-sponsored repression. We test our argument on a global sample of episodes of peace between 1981-2014 that follow an armed conflict. During this time the risks of repression and relapse into armed conflict are particularly high (e.g., Wallensteen 2015). We assess the militias' impact on repression in the short- (five years) and medium-term (ten years) postwar periods.[4]

Our results emphasize the detrimental legacies of conflict. Only PGMs that were inherited from the preceding conflict are systematically linked to worse human rights violations after the war. New militias more commonly focus on the opposition compared to war-time groups, without consistently affecting overall levels of repression.

This study has important policy implications. First, understanding drivers of postwar repression is crucial to reduce the risk of conflict re-escalation as repression directly affects the stability of peace, especially in weak states (Keels and Nichols 2018; Rost 2011; Young 2013). Second, by focusing on how the government treats fundamental rights to physical security we assess the quality of postwar peace as experienced by the population. It complements research on how international actors affect security (Kathman and Wood 2016; Murdie and Davis 2010) and how war changes the economy and society more broadly. Third, by identifying the trajectory of militias during and after civil wars, we trace the strategies of these actors in postwar societies. Beyond the detrimental impact of wartime militias, our results show that repression does not seem to be pre-determined by the characteristics or the type of termination of the preceding war.

Repression in postwar societies

Research on state-sponsored repression has shown that physical integrity rights are at particular risk during civil wars (e.g., Poe, Tate and Keith 1999; Zanger 2000). Hill and Jones (2014) emphasize the predictive power of civil war for explaining physical integrity

[4]By limiting the temporal horizon we reduce the risk that repression is driven by factors unrelated to the preceding conflict.

rights violations. Poe, Rost and Carey (2006) use civil wars to assess the future risk of state-sponsored violence. But we know little about the trajectory of human rights *after* such conflicts have come to an end. Once the fighting between the government and rebel groups has ceased, security and stability continue to be volatile. Unlike after wars *between* states, civil war societies have to learn to peacefully live with their former enemies, sometimes in the same village. This makes post-conflict peace a delicate task. Under such difficult conditions the government must create and maintain order and stability. Leaders in post-conflict societies are often insecure in their position and worry about being overthrown by their own military or by popular revolt. Being sensitive to real or imagined threats makes leaders more prone to repress (Poe 2004). The scarcity of economic resources after civil wars (Collier, Hoeffler and Söderbom 2008; Flores and Nooruddin 2009) put further strain on human rights. Leaders might want to prevent any potential or real threat by closely controlling society and by deterring or punishing those deemed to jeopardize the fragile postwar peace.

While postwar conditions provide plenty incentives for state-sponsored repression, they also provide the opportunity due to a lack of strong and independent political institutions that can hold the executive to account. Political institutions intended to check the power of the executive and its armed forces are sometimes non-existent or without real power and influence (e.g., Joshi and Mason 2011; Nilsson 2012) and take time to consolidate (Fortna and Huang 2012; Joshi 2010). It is not surprising that postwar societies are on average more repressive than those without a conflict history.[5] How can we explain varying degrees of repression in postwar countries? How can we identify countries that are most at risk of severe and widespread human rights violations? We argue that the type of wartime alliances a government maintains in the postwar period provides important insights to these questions.

[5]See Figure A1.2 in the appendix.

Pro-government militias in postwar societies

The relationship between the state and militias can vary by how formalized the link is, by what section of society the groups draw from (Carey and Mitchell 2017) and by how the government interacts with these groups (Staniland 2015). These characteristics can provide insights into the motivation of the government and the militias and how they affect ordinary citizens. Why governments continue to support and collaborate with irregular armed groups, even when circumstances change, also provide valuable insights into the benefits both sides expect from this connection and how this shapes respect for basic human rights. The reasons behind continuing an alliance with wartime militias likely differ from creating new linkages. In the next section we outline five mechanisms for why we expect wartime PGMs to be associated with increased postwar repression. The first two mechanisms apply to both wartime militias and to those newly created in the postwar period, while the last three are specific to PGMs that were inherited from the previous conflict.

Wartime militias and postwar repression

During civil wars many governments collaborate with irregular armed forces (Carey, Mitchell and Lowe 2013; Carey and Mitchell 2016; Jentzsch, Kalyvas and Schubiger 2015). After the conflict ends, governments often continue their wartime alliances. This continuation is partly due to policy inertia as practices tend to linger on (Pierson 2000), and the termination of a conflict does not automatically translate into the disarmament of all armed parties. The availability of light weapons continues to threaten the safety of civilians (Kathman and Wood 2016). Disarming militias is particularly challenging as they are rarely included in peace deals or disarmament programs. We argue that the incentives of the government and of militia members to continue this alliance as detrimental effects for human rights.

First, governments continue to rely on their wartime agents because they provide strategic benefits. Acemoglu, Robinson and Santos (2012, 7) argue that "nonstate armed actors can persist in part because they can be in a *symbiotic* relationship with specific

politicians holding power" (emphasis in the original). For example, paramilitaries can help deliver votes, as in Colombia (Acemoglu, Robinson and Santos 2012). Because militiamen act under government protection, they can employ unorthodox and violent methods to deliver votes and extract information. More generally, PGMs can help to create or maintain peace by intimidating the population to behave in a way desired by the leader. The local knowledge militias often possess provides governments with an additional strategic advantage. During civil wars PGMs are valued for their insights on insurgents (Clayton and Thomson 2016; Hughes and Tripodi 2009; Peic 2014); after the conflict their local knowledge enables them to identify and target groups that could pose a threat to the government. Finally, due to acting outside the formal state apparatus, PGMs provide the government with plausible deniability for the violence they commit (e.g., Alvarez 2006; Carey, Colaresi and Mitchell 2015; Mitchell 2004). This plausible deniability does not require the local community to be oblivious to the link between the government and the armed group. But the tenuous nature of the link makes it difficult to prove beyond doubt that the government ordered the violence. Avoiding accountability for violence is particularly beneficial in postwar periods when governments are under international scrutiny and dependent on foreign assistance. These strategic reasons for maintaining the wartime links likely result in higher levels of state-sponsored violence, as governments have reasons to use them as a tool for violence.

Second, legacy militias have economic benefits for the government. Maintaining links with irregular armed groups is cheaper than training, housing and monitoring regular forces. While militiamen are occasionally paid by the government, receive training and weapons from the military, they require fewer resources than regular forces. In the aftermath of war, which is usually characterized by financial constraints, governments have an economic incentive to continue their collaboration with militias—which facilitates higher levels of repression. By continuing to support these groups after the armed conflict, the government signals that it rates these benefits higher than centralizing, integrating and fully controlling all agents of violence.

The third mechanism linking legacy militias to higher levels of repression draws

on the longer-term nature of the relationship and the trust that might have developed during the war. Wartime militias will have previously proven loyal when ordered to commit acts of violence. This loyalty is important—and cannot be taken for granted. Agents of the state do not automatically follow orders to kill or torture civilians (Mitchell 2004; DeMeritt 2015). In the postwar context, agents have a strong incentive to shirk orders to repress because during that period international actors often pay closer attention to human rights conditions. Following orders carries risks for the perpetrators. A government as principal needs to assess the risk of orders being ignored. If armed agents shirk commands to kill, "the government may (appear to have) lost its coercive monopoly" (DeMeritt 2015, 432). This would have devastating consequences for a postwar government. A government likely appreciates being able to rely on "tried and tested" agents that have proven their loyalty before. Legacy militias might resist the urge to shirk when under the scrutiny of the international community in the postwar period. Therefore, governments might continue to support and collaborate with their wartime agents because they have more faith in these actors following orders even if this means violating internationally recognized human rights.

Fourth, wartime militiamen might be personally motivated to stay connected to the government to implement repression in the postwar period. They might want to spoil the peace and re-initiate the conflict for ideological and/or economic reasons. Members of wartime militias could be particularly committed to the cause of the war (Steinert, Steinert and Carey 2019). They might object to the peace agreement and be ideologically motivated to continue harming those perceived as opponents. Being driven by wartime goals, they might continue to attack former rebels even after the conclusion of the armed conflict, contributing to higher levels of repression. Beyond the ideological motivation to keep fighting for the goals that drove the preceding conflict, legacy militias might commit atrocities in the post-conflict era for personal gain without fear of repercussions from the state. As they have likely encountered significant levels of violence, they are probably desensitized towards using violence against non-combatants. Their threshold for violating physical integrity rights might be lower than for other individuals. As they

continue to enjoy protection by the government, they can use excessive violence for their own personal benefit.[6]

Finally, the government could simply tolerate their wartime PGMs, even if it does not expect them to deliver immediate benefits. Effectively disarming them is not only extremely difficult, but by alienating them, for example by declaring them illegal, the government risks that these forces turn against it. The militia could fight the government or bolster the forces of (former) rebel groups. Governments might also want to keep their options of using these groups in the future if circumstances change. Governments that tolerate the continued existence of these groups instead of actively disarming or distancing themselves from them are likely to have a more "lenient" attitude towards human rights in general. While the first four mechanisms suggest that wartime PGMs carry out acts of state-sponsored repression, the last mechanism hints at the general repressive propensity of the government.

In short, we expect that the reasons for why governments and militias continue their wartime alliance lead to higher levels of state-sponsored violations of physical integrity rights in the postwar period.

New militias and postwar repression

Governments might align with new militias in the postwar period to achieve the same strategic and economic benefits as they expect from continuing their alliance with wartime groups. New PGMs can also provide valuable local knowledge and plausible deniability for violence; just like inherited PGMs they require fewer resources—an important bonus in an economically constrained postwar environment.

New groups also offer specific benefits. Postwar governments might create new PGMs if they do not trust their security forces. For example, in the Republic of Congo, President

[6]Relatedly, Aliyev (2019) finds that PGMs increase the likelihood that conflicts end with low-activity violence.

Lissoubas came to power after disputed elections during an armed conflict in 1993. He was faced by two rivals who each had their own militia: former President Sassou-Nguesso was associated with the Cobras and former Prime Minister Bernard Kolelas with the Ninjas. Since President Lissoubas did not fully trust the military, he created his own militias soon after the peace agreement, the Aubevillois and the Zoulous. All militias were linked to extensive human rights abuses in the postwar period.[7]

In other cases, political parties might align with or create armed groups to help suppress opposition members or simply to intimidate the population. After the ceasefire between the government and the National Forces of Liberation (FNL) rebels in Burundi in 2008, the government supported the armed youth wing of the ruling party, the Imbonerakure. Since then they have been intimidating and harassing the opposition, contributing to the deteriorating human rights situation in the post-conflict period.[8] In other cases, rebel groups turn into pro-government militias if the insurgents become part of the post-conflict government, such as the Young Communist League (YCL) in Nepal. The YCL was the youth wing of the Maoist rebel group and continued as armed groups after the Maoists joined the government in 2008, attacking political opponents.[9] New militias may therefore lead to higher levels of state-sponsored violence in postwar periods compared to cases without such groups.

Data and research design

We investigate repression in the short- (five years) and medium-term (ten years) after a civil conflict between a government and an armed opposition that resulted in at least 25 battle deaths, using the UCDP/PRIO Armed Conflict Dataset (ACD) (Gleditsch

[7]See Background on militia groups, accessed August 16, 2018.

[8]See Human Rights Watch: Burundi: Attacks by Ruling Party Youth League Members, accessed August 15, 2018.

[9]Human Rights Watch: Nepal: Events of 2008, accessed August 15, 2018.

et al. 2002; Melander 2009). The unit of analysis is the country-year within the five- or ten-year window after the conclusion of an armed conflict. Only observations without fighting in any part of the country or with any rebel group enter our sample to avoid that *repression* is driven by continued fighting in one part of the country while a conflict with another rebel group has ended. A post-conflict period starts when the preceding conflict ends with a settlement or a victory by the government, or when the fighting has ceased for at least two consecutive years (cf. Doyle and Sambanis 2000). Whenever a country experiences renewed conflict above the 25 battle deaths threshold, the country exits our sample as it is then in a state of armed conflict again. We do not analyze the duration of peace, but investigate how pro-government militias affect repression over a short (up to 5 years) and medium (up to 10 years) time period after an armed conflict has ended. Our sample consists of conflicts that have ended in or after 1981, when data on PGMs become available and we identify the post-conflict periods until 2014.[10]

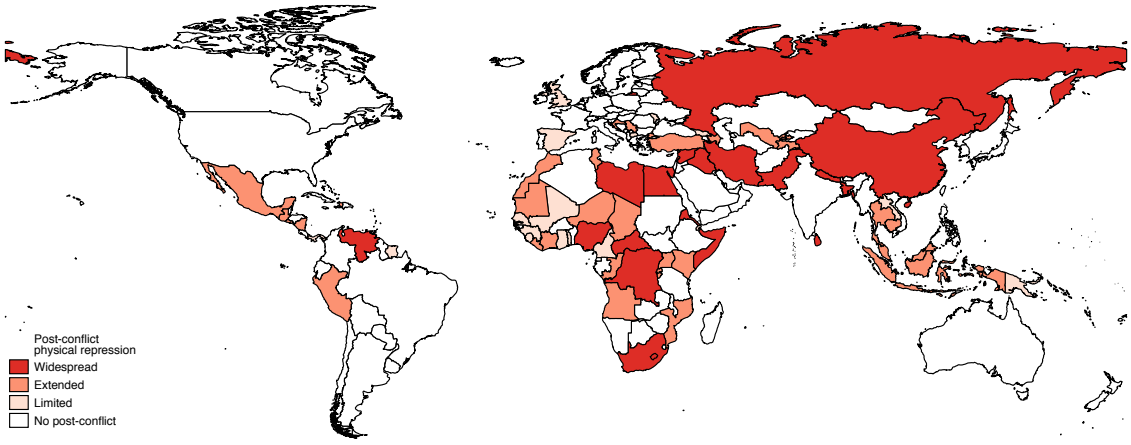
State-sponsored repression

We measure state-sponsored repression with the Political Terror Scale (PTS) (Wood and Gibney 2010).[11] This scale ranges from 1 to 5, where PTS Level 1 represents no repression, while higher levels indicate that physical violations are more severe and extend to the wider population. For our multivariate analysis, we collapse the dependent variable *repression* into three categories, "non or limited", "extensive" and "widespread" murders, disappearances, torture and political imprisonment. We merge the lower and upper end of the PTS scale with their adjacent categories due to the rare occurrence of the two extremes in post-conflict periods. As standard-based measure, the three levels of state-sponsored

[10]Figure A1.3 in the appendix shows how many post-conflict episodes are in the sample for the different years of postwar peace.

[11]We use the PTS based on Amnesty International, complementing it with the scores from State Department Country Reports for missing years (Poe, Carey and Vazquez 2001).

FIGURE 1 Post-conflict countries and levels of physical integrity rights violations 1981-2014



Note: Average physical integrity rights violations for up to the first five years after armed conflict ended.

repression represent substantively different scenarios in terms of types and extent of human rights violations that are carried out or sanctioned by the state.[12]

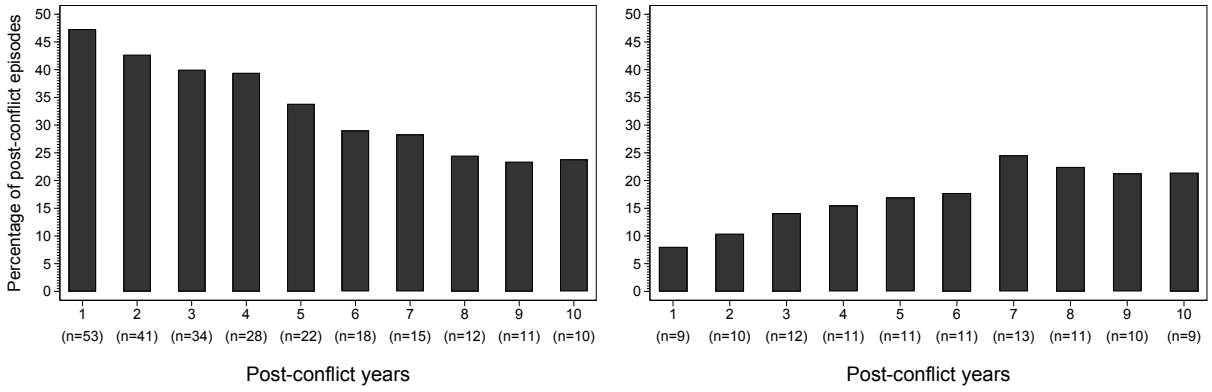
Figure 1 maps state-sponsored repression in post-conflict societies. It plots the average level of physical integrity rights violations for up to five years of peace after an internal armed conflict. It includes the most recent return to peace for countries that terminated a conflict since 1981. 30% of post-conflict countries between 1981 and 2014 experienced no or limited repression, 44% had extended and 26% suffered widespread or indiscriminate state-sanctioned repression. Countries in a postwar peace have generally worse human rights than those at peace without a recent conflict.[13]

[12]This operationalization avoids problems of perfect prediction, given that the infrequency of the lowest and highest category of the dependent variable may not vary within one of the categories of one or multiple independent variables (Long and Freese 2014, 319).

[13]Figure A1.2 in the appendix shows the percentages of observations that fall into each of the five categories of the PTS.

FIGURE 2 Proportion of post-conflict episodes with inherited PGMs and new PGMs

(A) PGMs inherited from conflict (B) New post-conflict PGMs



Pro-government militias in postwar societies

Our key explanatory variables are pro-government militias in the postwar period that already existed during the preceding conflict (*PGM inherited from conflict*) and that were newly created after the armed conflict (*PGM new to post-conflict*). We use the Pro-Government Militias Database (PGMD) 1.1.-2017 to identify PGMs (Carey, Mitchell and Lowe 2013; Carey 2017) and extend the coding to 2014, using the coding rules from the PGMD codebook. We identify whether a PGM was present in the postwar period and whether this group already existed during the preceding conflict or was created only after the conflict. Figure 2a graphs the proportion of postwar countries with such inherited wartime PGMs and shows that they were present in almost half of all post-conflict episodes in the first postwar year.[14] This proportion steadily declines over time to 24% of post-conflict episodes a decade later.

Figure 2b shows the share of post-conflict episodes with new PGMs. In contrast to the declining share of countries hosting wartime PGMs, the share of countries with new PGMs increases, although at lower levels and staying below about one quarter of

[14]A country could enter our dataset twice if it experiences two post-conflict episodes between 1981 and 2014. Most countries in our sample experience only one post-conflict episode.

post-conflict episodes.[15] For the regression analysis we aggregate the information by country-year to generate a count variable for the number of PGMs in each post-conflict country-year.[16]

Control variables

The nature of the preceding conflict and how it terminated could explain variation in postwar repression. Particularly long lasting and violent civil wars create an environment in which state repression is perceived to be commonplace and in which state actors continue to use violence in the post-conflict period (Bateson 2017). We capture the duration of the previous conflict with $civil\ war_{duration}$ and whether it was particularly violent by coding $civil\ war_{intensity}$ "1" if more than 1,000 battle deaths occurred during the last year of fighting, using data from Gleditsch et al. (2002). We expect that longer conflicts and more violent ones are correlated with higher levels of postwar repression.

How a civil war ended may offer another explanation for varying respect for physical integrity rights (e.g., Hartzell and Hoddie 2003; Mason et al. 2011). To test whether the outcome of the conflict shapes human rights, we account for *government victory* and *settlement*, using *faded intensity* as baseline category (Kreutz 2010). Table A1.4.1 in the appendix shows how common these termination types are and how often we find militias under these conditions. Most conflicts end with a settlement between the government and the rebel group(s) (N=50, 40%). In 38 cases (31%) the conflict came to an end because the number of battle deaths dropped below 25 for at least two consecutive years. About one fifth (N=24) of post-conflict episodes emerged from a government victory. Only a

[15] Governments create or affiliate themselves with new militia groups irrespective of whether they continue to be aligned with wartime PGMs. Hence, Figures 2a and 2b do not add up to 100%.

[16] Only in five conflicts did a government collaborate with an irregular armed group and then terminated this link at the end of the war: Haiti in 2005, Nicaragua in 1991, Panama in 1990, Liberia in 2004 and Nepal in 2007.

small minority ended with a rebel victory (N=12, 10%). As a rebel victory complicates whether the pro-government militias are inherited or new groups, and because they make up such a small proportion of our sample, we exclude them from our analyses.[17]

Excluding rebel victories, irrespective of how the conflict ended, about 60% of post-conflict episodes see at least one PGM. This finding counters the potential argument that militias are more closely associated with certain types of conflict termination. Among those episodes with at least one PGM, the distribution of new and old militias varies slightly depending on the nature of the conflict termination. Table A1.4.2 shows the percentages of post-conflict episodes for new and inherited PGMs, given that we observe at least one militia. After a government victory the share of wartime militias is particularly low (38%), while just over half of episodes following a low intensity termination have a PGM. After defeating the opposition, the government might feel slightly more comfortable to rely solely on its formal security apparatus. It is not surprising that without a clear and formalized end to the conflict, as is the case for low intensity terminations, the government is more likely to retain its irregular wartime allies so it can use them should the fighting intensify again. New PGMs are less common across all termination types, but most often found after a government victory (38%). During negotiated settlements it is probably difficult to get away with establishing a link to an irregular armed group.

We also control for possible confounders that may influence postwar repression and that might be linked to PGMs. Research on conflict termination and conflict recurrence highlights the importance of peacekeeping operations (PKO) (Fortna 2004; Toft 2009; Walter 2002). Kathman and Wood (2016) show that UN peacekeeping missions reduce violence against civilians in post-conflict societies. Hence they might also reduce the overall level of state-sponsored repression. We test for the impact of PKOs on repression with a dichotomous variable on PKOs from Mullenbach (2013).

The government's ability to engage in repression might be influenced by how

[17]Including them does not change our results (see Table A5.4 in the appendix).

constrained the executive is and by how repressive it acted in the past (Blankenship 2018; Colaresi and Carey 2008). We use *executive constraints* from the Polity score's component "xconst" to control for institutional limitations on post-conflict governments. It captures constraints on the executive without being influenced by state-sponsored violence (Vreeland 2008). We include a lagged dependent variable as levels of repression change only slowly within countries (Carey 2010; Poe, Tate and Keith 1999). Constraints on the executive should be associated with less repression, while higher levels of state violence in the previous year should lead to higher levels of repression in the current year. A change in government can increase repression in post-conflict by enforcing different policies to deal with the re-stabilization of the country. We control for *government change* using information from Goemans, Gleditsch and Chiozza (2009) and Hyde and Marinov (2012). This binary variable is lagged by one year to include government changes that occurred during the last year of conflict. We control for *free media* with a dummy variable from Whitten-Woodring and Van Belle (2017). If journalists can freely report about the government's actions, it should act with more restraint, resulting in lower levels of repression. We account for economic development with *GDP* per capita and the size of the *population* as both are important predictors of state physical violence (e.g., Hill and Jones 2014; Poe, Tate and Keith 1999). These variables are logged and taken from Gleditsch (2002). Table A1.1 in the appendix shows all summary statistics.

Methodology

To assess whether wartime and new PGMs aggravate repression in post-conflict societies, we use an ordered logit model as the distance between the three categories of our dependent variable (limited, extended, and widespread state repression) cannot be assumed to be equal (Long and Freese 2014).[18] Since the errors may vary systematically by country, we report robust standard errors clustered by country. We use cubic

[18]Post-estimation tests over the final models rejects the null hypothesis that the fitted models violate the parallel odds assumption.

polynomials of the time since the post-conflict period started (*peace years*) to account for temporal dependence (Carter and Signorino 2010).

Multivariate results

Our empirical analyses focus on post-conflict episodes of peace between 1981 and 2014. Our sample includes a maximum of 112 post-conflict episodes across 68 countries. The unit of analysis is the country-year. Table 1 presents the results from the ordered logit estimations on the three categorical outcomes of *repression*. We constrain our sample to the period of five (Models 1-3) and ten (Models 4-6) years after the conflict. Of the total number of countries that started a post-conflict period after 1981, 84% (58 countries) reach at least five years of consecutive post-conflict peace, 60% (41 countries) do so for at least ten years. Models 1 and 4 analyze the impact of our main explanatory variables on the level of physical integrity rights while controlling for characteristics of the post-conflict period. Models 2-3 and 5-6 add control factors related to the preceding conflict, which may mediate this effect. These measures do not contribute explanatory power to the models, as the models have higher values for the Akaike Information Criterion (AIC). Overall the models predict about 70% of outcomes correctly.

Before discussing our main findings, we briefly present the results from the control variables. Attributes of the preceding war do not seem to systematically influence postwar repression. Conflicts that lasted longer and that caused extensive casualties are not systematically linked to postwar repression. $Civil\ war_{duration}$ and $civil\ war_{intensity}$ fail to reach conventional levels of statistical significance. Different types of *conflict termination* also do not seem to have a distinct impact on postwar repression; neither $gov.\ victory_{termination}$ nor $settlement_{termination}$ reach meaningful levels of statistical significance. Mason et al. (2011) expect that after victory the government is less dependent on winning hearts and minds but is more concerned about rooting out any last pockets of resistance, which should increase repression. Our results suggest that the impact of a government victory on repression is at least not distinguishable from cases where the conflict ends

TABLE 1 Order logit estimations for the level of human rights violations in post-conflict societies

	Dependent variable: Physical Integrity Rights Violations					
	Short term [5 years post-conflict]			Medium term [10 years post-conflict]		
	(1)	(2)	(3)	(4)	(5)	(6)
PGM inherited from conflict$_{count}$	0.218**	0.197*	0.216**	0.202**	0.169*	0.206**
	(0.077)	(0.080)	(0.078)	(0.072)	(0.071)	(0.074)
PGM new to post-conflict$_{count}$	0.288	0.296	0.280	0.181	0.176	0.186
	(0.289)	(0.288)	(0.292)	(0.238)	(0.233)	(0.235)
Civil war$_{duration}$		0.005			0.003	
		(0.012)			(0.012)	
Civil war$_{intensity}$		0.346			0.583	
		(0.437)			(0.417)	
Gov. victory$_{termination}$			0.107			−0.065
			(0.387)			(0.349)
Settlement$_{termination}$			0.064			−0.099
			(0.277)			(0.263)
PKO$_{presence}$	0.348	0.346	0.357	0.206	0.193	0.214
	(0.279)	(0.276)	(0.268)	(0.234)	(0.232)	(0.233)
Executive constraints	−0.172*	−0.182*	−0.174†	−0.152*	−0.167*	−0.146†
	(0.083)	(0.084)	(0.089)	(0.071)	(0.068)	(0.076)
Government change$_{lag}$	0.154	0.157	0.156	0.447	0.449	0.440
	(0.411)	(0.401)	(0.412)	(0.301)	(0.302)	(0.303)
Physical integrity rights violations$_{lag}$	1.743**	1.715**	1.743**	1.750**	1.713**	1.752**
	(0.230)	(0.236)	(0.233)	(0.179)	(0.175)	(0.179)
Free media$_{lag}$	−0.464†	−0.415†	−0.466†	−0.375†	−0.316	−0.363†
	(0.247)	(0.243)	(0.257)	(0.206)	(0.198)	(0.211)
GDP$_{log}$	−0.123	−0.124	−0.122	−0.139	−0.136	−0.147
	(0.128)	(0.127)	(0.127)	(0.118)	(0.120)	(0.111)
Population$_{log}$	0.403**	0.408**	0.413**	0.404**	0.417**	0.395**
	(0.083)	(0.094)	(0.089)	(0.075)	(0.083)	(0.086)
Peace years	−1.747	−1.690	−1.731	−0.194	−0.219	−0.197
	(1.672)	(1.689)	(1.677)	(0.333)	(0.335)	(0.336)
Peace years$_2$	61.613	58.994	61.031	3.526	3.849	3.600
	(65.291)	(66.106)	(65.468)	(7.202)	(7.235)	(7.331)
Peace years$_3$	−6.511	−6.204	−6.452	−0.178	−0.194	−0.183
	(7.518)	(7.612)	(7.539)	(0.460)	(0.462)	(0.469)
Cut 1	4.984**	5.004**	5.143**	6.108**	6.106**	5.940**
	(1.645)	(1.644)	(1.775)	(1.296)	(1.283)	(1.414)
Cut 2	7.926**	7.950**	8.085**	8.999**	9.011**	8.833**
	(1.638)	(1.640)	(1.771)	(1.332)	(1.327)	(1.445)
Wald χ^2	170.52**	175.13**	195.23**	229.51**	229.22**	248.55**
AIC	661.81	664.87	665.68	1042.90	1043.19	1046.69
Number of clusters	68	68	68	68	68	68
Number of observations	429	429	429	681	681	681

Note: Values are coefficients with robust standard errors in parentheses, clustered on country.
† p<0.1, * p<0.05, ** p<0.01 (two-tailed test).

due to low casualty numbers.[19]

Factors that generally increase repression also seem to contribute to repression in postwar societies. *Executive constraints*, prior levels of *physical integrity rights violations* and *population* are systematically related to repression. Restrictions on executive authority have a negative and statistically significant impact on post-conflict repression. Executives that are accountable to and constrained by other branches are less likely to engage in extended physical integrity rights violations in post-conflict environments. *Population* has a positive and statistically significant effect on state-sponsored repression (Poe and Tate 1994; Poe, Tate and Keith 1999). The lagged dependent variable does not "wash out" the effect of our key explanatory variables despite the static nature of the repression measure and the short time period of our sample.

Post-conflict characteristics fail to reach conventional levels of statistical significance. Estimates for *peacekeeping operations* suggest no consistent effect of these forces on state-sponsored violence.[20] The negative coefficient for *free media* suggests that it might reduce repression, but it fails to reach meaningful levels of statistical significance across all models. During the five or ten years after an armed conflict, media freedom does not consistently help to protect physical integrity rights.[21] *GDP* also has a negative sign as

[19]As the low numbers of observations prevent us from exploring the effect of inherited and new PGMs conditional on the type of conflict termination, descriptive statistics shown in Table A1.4.2 highlight that there are no stark differences in the post-conflict episodes with PGMs by termination type.

[20]The positive sign of the coefficient is possibly due to the fact that PKO missions are not randomly distributed across conflicts as they tend to be sent to more "difficult cases" (e.g., Fortna 2004; Melander 2009; Walter 2002). These are likely to have worse human rights conditions also after the fighting has ended.

[21]The lack of a statistically significant impact is not due to a lack of variation. About half of our observations have a free media, while the other half does not.

expected though also fails to reach conventional levels of statistical significance. This might be due to limited variation of economic development in post-conflict countries.

The results provide strong evidence for the expectation that wartime inherited PGMs are linked to higher levels of repression, but only weak evidence for a similar impact of new ones. The variable *PGM inherited from conflict* has a positive and statistically significant impact on state repression across all models. This is consistent with the finding that PGMs are related to a higher level of atrocities during counterinsurgencies (Kowalewski 1992; Lyall 2010) and generally (Mitchell, Carey and Butler 2014). The legacy of irregular armed groups that are aligned with the government and are carried over from the preceding conflict deteriorates the human rights condition compared to postwar scenario without such militias.

The variable *PGM new to post-conflict* produces consistently positive coefficients but fails to reach meaningful levels of statistical significance. This might be because they are relatively uncommon during the postwar period, as shown in Figure 2b. While the goal of this study is not to explain the emergence or resilience of these groups, a look at the circumstances under which they appear in the postwar period might provide some suggestions for the lack of support for a systematic link between them and postwar repression. In most cases (68%), governments create them *alongside* wartime PGMs. New militias operate alone in fewer instances (32%). In none of our cases did a country discard a wartime PGM and then align with or create a new one. New PGMs seem to supplement rather than substitute existing militias. Governments extend an already familiar strategy, rather than creating a new type of alliance. This complementary logic between old and new militias might explain the lack of impact new groups have on repression.

Governments seem to use wartime militias for repressive campaigns, which increases postwar levels of repression but which are not exacerbated by new ones. In addition to the small number of new PGMs and them mostly being used in conjunction with inherited groups, the different impact between these two types of PGMs could also suggest that the characteristics that are specific to the legacy militias and do not apply to new

groups are responsible for their impact on repression. We have argued that governments might continue their alliance with their "tried and tested" partners because of the special relationship that developed during the conflict. During this earlier collaboration the PGM could have proven to be a reliable actor and had probably carried out government commands even at personal risks to the agents. Furthermore, members of wartime militias are more likely than members of new ones to have extensive experience in the use of violence, which makes their tolerance threshold for committing atrocities likely lower, and to be strongly motivated by the causes of war, which might make them pursue perceived opponents even after the end of the conflict. These differences likely play an important role when explaining how irregular armed groups affect postwar repression.

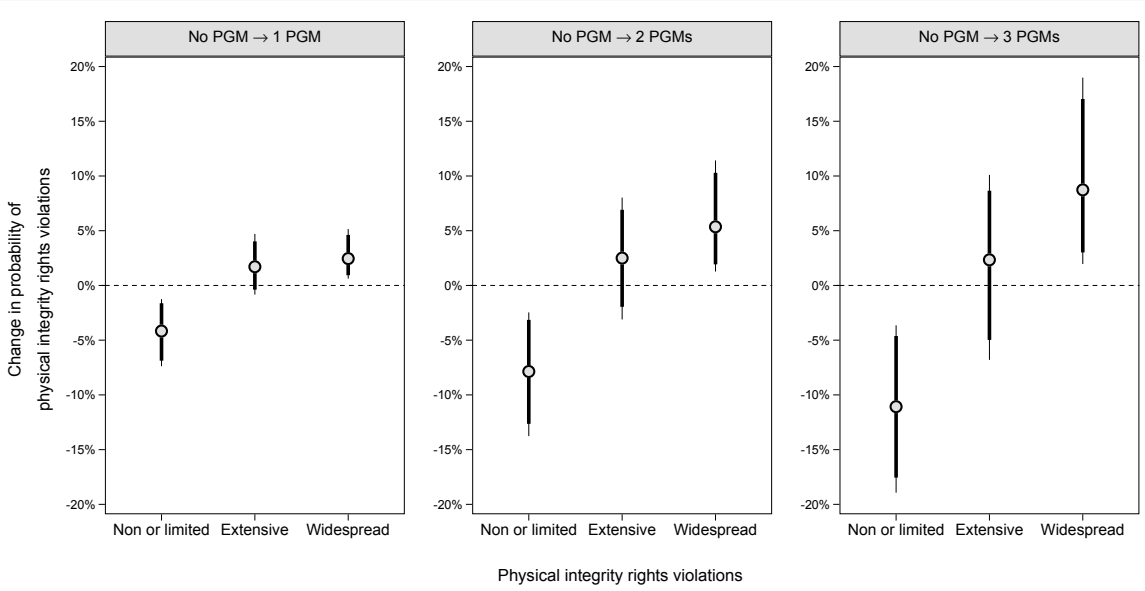
The substantive impact of wartime PGMs

To better understand the substantive impact of *inherited PGMs* on physical integrity rights violations, we estimate the change in the predicted probabilities of repression for average post-conflict cases. The simulations are based on Model 1 in Table 1.[22] We focus on countries that managed to avoid a relapse into civil conflict for at least five years to avoids the risk that the effect is driven by countries that have militias and extremely short peace spans.[23] Figure 3 shows the changes in the predicted probabilities for each value of *repression* comparing a post-conflict country without and with inherited pro-government militias. We simulate the change from none to one, two and three PGMs as these are the most frequent values in the dataset. Other control variables are held at their mean (continuous variables) or mode (categorical variables). The results show that when a government continues to collaborate with wartime militias, the country is significantly less likely to experience only limited forms of repression compared to a similar country

[22]Simulated scenarios to graph substantive effects were estimated using Clarify (King, Tomz and Wittenberg 2000).

[23]Repeating these simulations for countries with a ten-year long post-conflict period does not substantively change the results.

FIGURE 3 Substantive effect of conflict *inherited pro-government militias* on *repression* in the fifth year of post-conflict peace



Note: The thin and thick vertical lines indicate 95% and 90% confidence intervals.

without such PGMs (-4.11%, -7.8% and -11% for each simulated change).

PGMs that linger on from the preceding conflict are associated with a substantively higher risk of extensive and widespread political imprisonment and torture, increasing risk of widespread repression (2.4%, 5.3%, and 8.7% for each simulated change). Figure 3 highlights the delicate situation of post-conflict societies. The termination of an armed confrontation between the government and rebels is no guarantor of security and meaningful peace when governments continue to support or tolerate their wartime allies. While the prospects of large-scale human rights violations decline if countries manage to avoid a renewed intra-state war for at least five or ten years, collaborating with militias reduces the prospects of respecting the right to physical integrity in post-conflict societies.[24]

[24]We report the models' predicted probabilities in the appendix.

The profile of victims of wartime and new PGMs

We argued that the government might rely on their experienced and trusted wartime agents to spread violence after the conclusion of the civil war. They might use them for strategically beneficial violence at low cost or they might tolerate their violent behavior, which could be driven by personal goals or conviction. To shed some light on these mechanisms, we show descriptive evidence on whom these militias are reported to target in the postwar period.

If the government continues to rely on PGMs for strategic reasons, they would likely target the opposition to deter any threats from known enemies. Attacking members of the political opposition is also consistent with the argument that militiamen are driven by the wartime goals.[25] If the government has lost control over them, but tolerates their violent behavior to not alienate them, they would be more likely to target ordinary civilians.

Using information from the Pro-Government Militias Database (PGMD), we identify for each PGM whether it targeted (1) exclusively civilians, (2) exclusively members of the armed or unarmed opposition, (3) both groups simultaneously, (4) only other types of victims, or (5) whether there are no reports on the group victimizing anybody in the post-conflict period. As the information provided by the PGMD is time-invariant, using the sources of these database we check for each wartime PGMs whether the militia targeted a particular group *after* and not (only) during the conflict.[26]

Figure 4 shows the percentage of wartime and new PGMs that intimidate particular sections in the post-conflict society.[27] New and old militias show a different target pattern.

[25]While the motivation of the militiamen due to ideological conviction and the incentive of the government to terrorize members of opposition are observationally equivalent, it is unlikely that these two motivations are conceptionally in competition with each other.

[26]See the appendix for more details on the coding of targets.

[27]While the unit of analyses for our multivariate regression is the country-year, the unit

Most noticeable is that over half of pro-government militias that were newly formed after the conflict target members of the opposition, including (former) rebels, *without* attacking ordinary civilians. An additional 20% target civilians *as well as* the opposition. Hence, about three quarters of government militias that are new to the postwar era terrorize the opposition. Examples include the Bangladesh Chhatra League, who targeted supporters of opposing youth leagues, or several village defence committees in southern Thailand that were supposed to fight Communist insurgents after the civil war subsided in 1982, and the southwestern militias in Cote d'Ivoire that President Gbagbo created after the 2002-2004 civil war to intimidate the opposition. Governments seem to generate new armed groups in the postwar period for specific strategic reasons.

How does this information square with the lack of statistically significant impact of new PGMs on postwar repression? In part this could be due to the low number of new PGMs. Most likely it is due to the very different data generating processes that are behind the data on PGM targets and the data on repression. The PGMD codes a particular target on the group level based on news sources, where one report on one instance is sufficient to trigger the coding. The PTS, our source for repression, uses Amnesty International and State Department Human Rights Reports to identify the *overall* level of respect for physical integrity rights.[28] Therefore, the coding of repression requires more systematic and general evidence, while coding targets of PGMs only requires the reporting of specific and possibly singular events, which might not reflect the wider level of repression as captured by the PTS. The attacks of new PGMs are likely below the level that would trigger the PTS to identify worse human rights records. This could be due to the small number of PGMs and/or their isolated attacks on the opposition and civilians.

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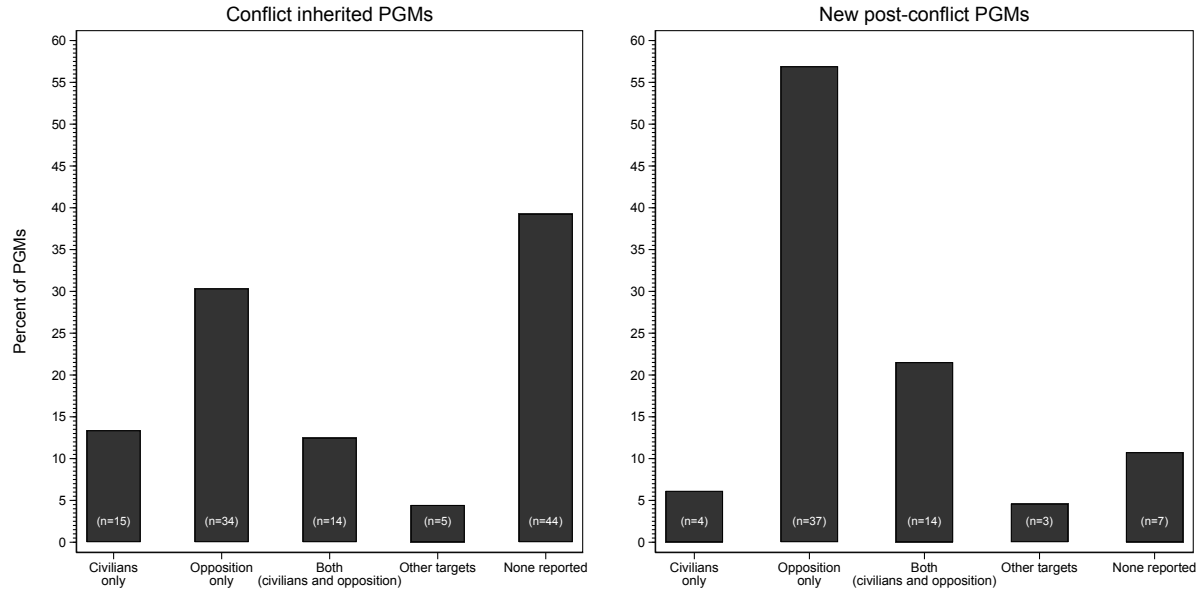
of analysis for Figure 4 is the pro-government militia in the postwar period, as the information on targets in the PGMD is time-invariant.

[28]See The Political Terror Scale at http://www.politicalterrorscale.org/About/FAQ/

FIGURE 4 Distribution of target types by pro-government militias



About 60% of wartime militias use violence against civilians and/or the opposition. Since the multivariate results suggest they systematically affect postwar repression, they likely attack civilians and oppositions in large numbers and with such violence that it shapes overall levels of repression.[29] For almost 40% of militias that survived the end of the civil war, there are no reports of them targeting anybody.[30] Oftentimes these groups seem to have ceased their activities with the end of the war but they were not disbanded until a few years later, such as several groups in Nigeria between 2005-2008. In many cases governments seem to be content with these groups remaining dormant, possibly to be re-activated if circumstances change. The large proportion of militias without identifiable targets during the observed time period is also in line with our argument that the government's failure to terminate these groups hints at a more *laissez-faire* attitude towards human rights generally, which points to more repression not just directly

[29]Note that the data on targets do not contain any information on the nature of the attack, such as frequency or intensity.

[30]The lack of reported atrocities does not necessarily mean that the groups were not involved in violence but merely that none was reported in the media.

perpetrated by the militia but also by regular security forces.

Robustness checks and alternative explanations

We conduct several robustness checks for which we briefly discuss the results. First, we re-estimate our analyses with an alternative dependent variable to ensure that the results are not artifacts of a particular measure. We replace the PTS with the latent measure of respect for physical integrity rights from Fariss (2014), where higher values reflect better respect for human rights. Results from the ordinary least squares regressions—given the continuous nature of this alternative dependent variable—validate our findings. We also use this estimation technique to replicate our analysis on the five-point Political Terror Scale. This dependent variable may be considered as a continuous outcome given the consecutive values of the scale (Ferrer-i Carbonell and Frijters 2004). We include regional fixed effects to account for possible regional trends. We found no substantive changes to our main results (see Table A2.1 in the appendix).

Second, governments that anticipate a re-escalation of tensions might be more likely to maintain their links to irregular armed groups or create new ones, and at the same time implement repressive policies. Our results could then be an artifact of very short spells of peace sandwiched between episodes of war. Then the findings should only hold for short-lived peace episodes. To address this possibility, we re-estimate Model 4 from Table 1. Each iteration systematically excludes all country-years from post-conflict episodes that last a maximum of one year, up to two, three, four or five years (see Table A3.1). The substantive results remain unchanged. Wartime militias continue to have a positive and statistically significant impact on repression even when we exclude short peace episodes.[31] Militias that survive the end of the armed conflict and contribute to repression without driving the country into another civil war oftentimes extend their purpose from tackling former rebels to contributing to general "law enforcement activities", terrorizing civilians

[31]When the sample excludes all country-years of peace episodes that last up to four or five years, the confidence intervals become wide, but the sample size gets also smaller.

and/or criminals. Examples include the Rangers and the Village Defence Volunteers in Thailand, Rela in Malaysia and the Civilian Defense Patrols in Guatemala.[32]

To check whether our results are driven by countries that manage to avoid a re-escalation of conflict for a very long time, we exclude those with peace episodes of one decade or longer (see Table A3.1). The coefficient for new militias is now positive and statistically significant. Only a small share of governments tie new links with irregular armed groups in the postwar period, but if they do, repression seems to increase in those countries that revert back to war within a decade. Future work might want to investigate the conditions under which these new groups trigger (new) armed conflicts.

Third, to avoid that countries with a particularly large group of PGMs drive the results, we replicate our main analysis with the log of the counts. While the majority of post-conflict countries have none or few PGMs, some have more than six (e.g., Ghana, Indonesia or the former Yugoslavia). The substantive results again remain unchanged (see Table A4.1).

Fourth, the dynamics of the militia groups on repression might be driven by how formal their connection to the government is. We replace conflict inherited and new militias with a measure for informal and semi-official PGMs (see Table A5.2). Groups with an informal link are consistently associated with higher levels of state-sponsored repression, while those with a formalized link are consistently not. Similar to the effect of PGMs on human rights in general, informal groups are driving the effect on repression (Mitchell, Carey and Butler 2014). Governments might be able to better control semi-official PGMs and prevent repression. But semi-official PGMs might also serve a different purpose, for example preventing a coup-d'etat (Carey and Mitchell 2016), which would not necessarily affect general levels of physical integrity rights violations. In the appendix we show how war legacy PGMs and new PGMs are connected to the

[32]For a discussion on the violent behavior of the Civilian Defense Patrols in Guatemala, see Bateson (2017).

government. For both types an informal link is more common, slightly more so for the new groups. That the majority of new groups have an informal link to the government fits the picture that they are used to repress opponents while keeping obscuring the government's involvement.

Fifth, we check the robustness of our findings against including additional control variables that might affect post-conflict repression and the presence of pro-government militias. Based on Model 1 in Table 1, we include indicators for the *onset* of pro-government militias in the previous year, the Cold War, whether the militia was a former rebel group and for military expenditure. A new militia might use excessive violence only as soon as it becomes aligned with the government. It would then increase the overall level of state-sponsored repression only early on. Controlling for the Cold War allows us to capture potentially different dynamics of observing PGMs and repression during this period (Kalyvas and Balcells 2010). Rebel groups that turn into pro-government militias, either because some forces switch sides or because the rebels join the government, might have a particularly devastating effect on post-conflict human rights. High military expenditure can reduce the necessity to use cheaper PGMs, while simultaneously affecting repression. Across all specifications, our results remain stable (see Table A5.3).

Finally, we include the small number of postwar peace episodes in the sample where a rebel victory terminated the conflict. Again, our findings continue to hold (see Table A5.4).

Conclusion

Countries that emerge from civil war face enormous difficulties in re-establishing security and political institutions. In volatile post-conflict societies, governments are keen to contain dissent and to strengthen their hold on power. Governments are also motivated to minimize international attention at a time when outside actors look more closely at their internal affairs. Despite the volatility and the potential risks to human rights in

postwar societies, we have only limited understanding of what affects state-sponsored repression during these times.

We zoom in on the role of pro-government militias, which are common in intra-state armed conflicts. Our data have highlighted that in most cases where a government had used a militia during the civil war, this relationship carried on in the postwar period. This makes a systematic analysis of whether and how these groups affect security and peace *after* the war even more important. Our results have consistently shown that wartime government militias are linked to more extensive state-sponsored repression in postwar societies, compared to cases without such irregular forces. Members of wartime militias likely have been perpetrators of human rights violations during the conflict, which makes them suitable agents for implementing repression in the postwar period. They might also be personally motivated by the grievances and divisions that fuelled the conflict and hence continue repressing those perceived as the enemy, even after the conclusion of the war. A failure to disarm or fully integrate irregular militias also hints at a somewhat "lenient attitude" of the government towards protecting basic human rights, which is reflected in worse repression.

The impact of newly formed alliances between the government and irregular armed groups on postwar repression is less clear. The lack of a strong link could be due to the comparatively few instances where governments newly align with irregular armed groups in postwar settings. New groups seem to concentrate more on assaulting the opposition, which does not seem to translate into a systematically higher *general* level of state-sponsored violence.

While an in-depth investigation of a government's motivation to align with new groups in the postwar period is beyond the scope of this study, our data provide initial insights. New PGMs usually operate *alongside* wartime inherited ones. They seem to supplement but never substitute old groups. They usually appear when the government won the preceding civil war. Future research might investigate whether groups that are newly created in the postwar environment increase the risk of a re-escalation of conflict,

just as wartime PGMs increase the risk of renewed war (Steinert, Steinert and Carey 2019).

Characteristics of the conflict and how it ended do not seem to have a clear impact on postwar repression. This should present an optimistic note for policymakers, as the recent conflict does not determine subsequent respect for physical integrity rights. Wide-ranging disarmament programs that incorporate and "neutralize" pro-government militias could be an important step towards establishing peace, security and the protection of physical integrity rights in volatile postwar societies—irrespective of the conflict history.

Our results emphasize the need to incorporate irregular government-aligned forces in the peace process, disarmament and re-integration programs. Systematically and effectively dismantling these irregular forces should form an important part of peace negotiations. Otherwise the legacy of PGMs continues to affect the quality of peace. We have only taken one step towards improving our understanding of the varying quality of post-conflict peace and the role pro-government militias play. More research is needed to provide insights on the logic behind creating new militias, but also whether locally recruited civil defense forces are better equipped to protect postwar communities from crime, or whether ethnically recruited groups are particularly difficult to dissolve and more violent towards out-groups. Given the "stickiness" or wartime militias, more work is needed on how militia groups can be effectively disarmed and dissolved after armed conflict in order to protect the basic human rights in post-conflict societies.

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The legacy of war: The effect of militias on postwar repression

Supplementary Appendix

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A1 Summary and descriptive statistics

A1.1 Summary statistics

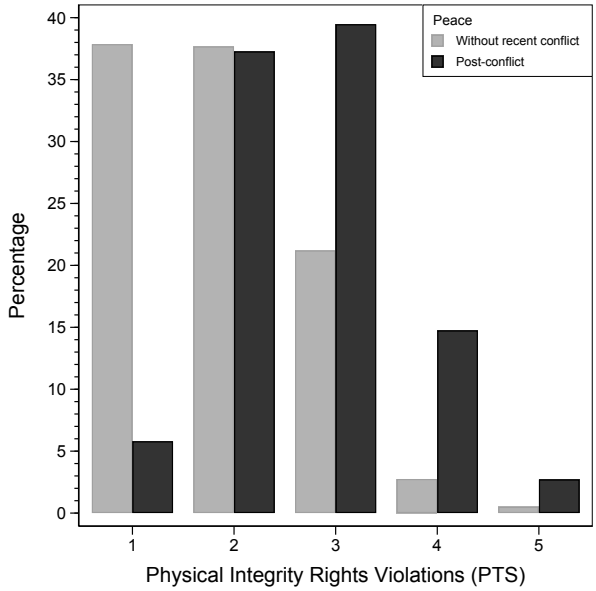
TABLE A1.1 Summary statistics

	Type	Obs.	Mean	Std. dev.	Min.	Max.
Physical integrity rights violations	Categorical	1140	2.80	0.74	2.00	4.00
PGM inherited from conflict	Count	1115	0.64	1.37	0.00	11.00
PGM new to post-conflict	Count	1115	0.30	0.72	0.00	6.00
Civil war$_{duration}$	Count	1142	9.16	8.57	1.00	37.00
Civil war$_{intensity}$	Binary	1142	0.08	0.28	0.00	1.00
Conflict termination$_{type}$	Categorical	1142	2.92	0.79	2.00	4.00
PKO$_{presence}$	Binary	1142	0.16	0.37	0.00	1.00
Executive constraints	Continuous	1127	4.36	1.94	1.00	7.00
Government change$_{lag}$	Binary	1142	0.08	0.28	0.00	1.00
Physical integrity rights violations$_{lag}$	Categorical	1140	2.83	0.75	2.00	4.00
Free media$_{lag}$	Binary	1142	0.47	0.50	0.00	1.00
GDP$_{log}$	Continuous	1142	8.21	1.02	4.90	10.57
Population$_{log}$	Continuous	1142	9.32	1.37	5.97	14.13
Peace years	Continuous	1142	9.76	7.70	1.00	34.00
Peace years$_2$	Continuous	1142	1.54	2.11	0.01	11.56
Peace years$_3$	Continuous	1142	30.56	57.35	0.01	393.04

A1.2 Political Terror Scale distribution across types of peace

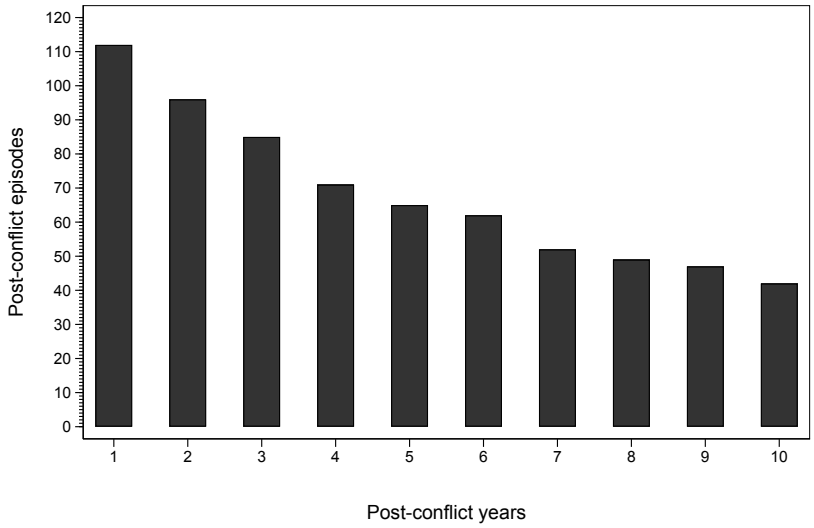
Figure A1.2 shows the distribution of the Political Terror Scale (Wood and Gibney 2010) for two scenarios. The light gray bars represent countries that did not experience any armed conflict, while the black bars stand for countries that were involved in a civil war during the preceding decade. Peace spells without prior conflict (gray) are characterized by no or only limited repression (mean PTS=2), while peace in post-conflict societies (black) most commonly experience extensive political imprisonment and some political executions (mean PTS=3). This begs the question of what contributes to a more "repressive peace" in these fragile environments.

FIGURE A1.2 Average values of Political Terror Scale across peace types



A1.3 Frequency of post-conflict observations in our sample

FIGURE A1.3 Frequency of post-conflict observations over time



A1.4 Distribution of post-conflict episodes and PGMs by conflict termination type

TABLE A1.4.1 Distribution of post-conflict episodes by conflict termination type

Episodes	No PGMs	PGMs	Total	Percentage
Government victory	10 (41.6%)	14 (58.4%)	24	19.36%
Rebel victory	9 (75.0%)	3 (25.0%)	12	9.68%
Settlement	20 (40.0%)	30 (60.0%)	50	40.32%
Low intensity	16 (42.1%)	22 (57.9.%)	38	30.64%
Total	55	69	124	100%

Note: Row percentages are within brackets.

TABLE A1.4.2 Distribution of post-conflict episodes with PGMs by conflict termination type

	Relation to previous conflict	
Episodes	Inherited from conflict	New post-conflict
Government victory (n=24)	37.5%	37.5%
Settlement (n=50)	48.0%	24.0%
Low intensity (n=38)	52.6%	26.3%

Note: Figures estimated for post-conflict episodes with Pro-government militias present. Percentages do not add to 100% because a given post-conflict episode may have more than one type of PGM present at the same time.

TABLE A1.4.3 Distribution of post-conflict PGMs by their relation to the government

PGMs	Semi-official	Informal	Total
Inherited from Conflict	40.18% (45)	59.82% (67)	100% (112)
New to post-conflict	38.46% (25)	61.54% (40)	100% (65)
Total PGMs	70	107	177

Note: Figures estimated across the 66 post-conflict peace episodes with pro-government militias. The unit of anlysis here is PGM.

A2 Models with alternative dependent variables and modeling strategy

Fariss (2014) argues that data collected from human rights reports (such as the Political Terror Scale) may not offer reliable information on human rights practices. This is mainly the case because "(1) government authorities have an incentive to hide the use of these policy tools and (2) observers and activists use countervailing strategies in order to reveal, understand, and ultimately change repressive practices for the better" (Fariss 2014, 297). This generates systematic temporal bias in standard models of repression given the variation over time on standards of accountability.

Fariss (2014) offers an alternative latent measure based on information from multiple sources to overcome these limitations.[33] The result is a continuous measure where positive values indicate more respect for physical integrity rights while negative values indicate more abusive behavior of the government against the civilian population. We use this measure as a dependent variable to replicate the estimations from Model 1 in Table 1. Given the panel structure of the data with temporal variation, we address concerns of multicolliniarity, and autocorrelation and heterogeneity reporting estimation results for models with clustered standard errors and panel clustered standard errors respectively. Negative coefficients for the Fariss (2014) latent measure in Table A2.1 corroborate the main findings from Table 1.

We also use this estimation technique to replicate our analysis on the five-point Political Terror Scale. This dependent variable may be considered as a continuous outcome given the consecutive values of the scale (Ferrer-i Carbonell and Frijters 2004).

[33]For more information, see Fariss (2014, 2018). For a critique of this measure, see Cingranelli and Filippov (2018).

TABLE A2.1 OLS estimations for the level of human rights violations in post-conflict societies based on Model 1 in Table 1—alternative dependent variable including regional fixed effects

	Dependent variable: Fariss (2014)		*Dependent variable*: PTS (1-5)	
	Cluster SE	PCSE	Cluster SE	PCSE
	(1)	(2)	(3)	(4)
PGM inherited from conflict$_{count}$	−0.071*	−0.088**	0.053†	0.055**
	(0.035)	(0.015)	(0.028)	(0.019)
PGM new to post-conflict$_{count}$	−0.146*	−0.142**	0.081	0.085
	(0.069)	(0.043)	(0.081)	(0.067)
PKO$_{presence}$	−0.139	−0.163**	0.199*	0.207*
	(0.085)	(0.057)	(0.095)	(0.082)
Executive constraints	0.077*	0.084**	−0.054†	−0.056*
	(0.031)	(0.015)	(0.031)	(0.024)
Government change$_{lag}$	−0.058	−0.052	−0.045	−0.046
	(0.071)	(0.049)	(0.106)	(0.101)
Physical integrity rights violations$_{lag}$	−0.355**	−0.215**	0.501**	0.483**
	(0.040)	(0.032)	(0.056)	(0.067)
Media freedom$_{lag}$	0.218*	0.204**	−0.140†	−0.142
	(0.091)	(0.053)	(0.081)	(0.092)
GDP$_{log}$	0.056	0.102**	−0.048	−0.052
	(0.065)	(0.028)	(0.059)	(0.038)
Population$_{log}$	−0.112**	−0.142**	0.134**	0.138**
	(0.025)	(0.017)	(0.027)	(0.026)
Peace years	0.219	0.167	−0.448	−0.452
	(0.163)	(0.178)	(0.495)	(0.382)
Peace years^2	−7.846	−4.823	17.894	17.878
	(6.198)	(6.790)	(19.138)	(14.668)
Peace years^3	0.904	0.531	−2.081	−2.073
	(0.707)	(0.758)	(2.182)	(1.663)
Constant	1.157†	0.642*	0.810	0.870†
	(0.610)	(0.319)	(0.628)	(0.498)
Region FE	Yes	Yes	Yes	Yes
R^2	0.74	0.67	0.57	0.56
Rho		.47		.03
Number of clusters	67		68	
Number of observations	415	415	429	429

Values are coefficients with robust standard errors in parentheses, clustered on country.
† p<0.1, * p<0.05, ** p<0.01.

A3 Models with step-wise exclusionary criteria for post-conflict duration

TABLE A3.1 Ordered logit estimations for the level of human rights violations in post-conflict societies based on Model 4 in Table 1—step-wise exclusion of post-conflict episodes based on their total duration

	Dependent variable: Physical Integrity Rights Violations					
	Excluding post-conflict episodes of maximum duration of (in years):					
	1	<=2	<=3	<=4	<=5	>=10
PGM inherited from conflict$_{count}$	0.214**	0.214**	0.221**	0.199*	0.162†	0.235**
	(0.076)	(0.080)	(0.083)	(0.089)	(0.094)	(0.073)
PGM new to post-conflict$_{count}$	0.172	0.187	0.126	0.109	0.123	0.597**
	(0.240)	(0.248)	(0.237)	(0.246)	(0.241)	(0.229)
PKO$_{presence}$	0.229	0.143	0.155	0.151	0.160	0.549
	(0.232)	(0.229)	(0.239)	(0.257)	(0.258)	(0.348)
Executive constraints	−0.165*	−0.150*	−0.122†	−0.116†	−0.112	−0.257*
	(0.069)	(0.069)	(0.068)	(0.070)	(0.074)	(0.104)
Government change$_{lag}$	0.521†	0.559†	0.718*	0.682†	0.690†	−0.097
	(0.315)	(0.322)	(0.348)	(0.356)	(0.358)	(0.463)
Physical integrity rights violations$_{lag}$	1.766**	1.754**	1.765**	1.771**	1.792**	1.581**
	(0.183)	(0.186)	(0.192)	(0.188)	(0.189)	(0.255)
Free media$_{lag}$	−0.361†	−0.376†	−0.418†	−0.486*	−0.421†	−0.412
	(0.211)	(0.206)	(0.226)	(0.229)	(0.229)	(0.341)
GDP$_{log}$	−0.114	−0.093	−0.118	−0.104	−0.151	−0.176
	(0.117)	(0.118)	(0.127)	(0.127)	(0.130)	(0.175)
Population$_{log}$	0.413**	0.407**	0.423**	0.402**	0.424**	0.413**
	(0.075)	(0.076)	(0.077)	(0.077)	(0.078)	(0.130)
Peace years	−0.123	−0.097	0.123	0.021	−0.036	−0.698
	(0.358)	(0.350)	(0.365)	(0.366)	(0.382)	(0.545)
Peace years$_2$	2.333	2.117	−1.568	0.616	1.685	15.590
	(7.578)	(7.420)	(7.753)	(7.856)	(8.147)	(12.047)
Peace years$_3$	−0.115	−0.114	0.081	−0.045	−0.101	−1.086
	(0.478)	(0.469)	(0.486)	(0.494)	(0.511)	(0.792)
Cut 1	6.544**	6.732**	7.248**	7.080**	6.951**	4.092**
	(1.310)	(1.333)	(1.330)	(1.365)	(1.408)	(1.563)
Cut 2	9.438**	9.645**	10.095**	9.898**	9.813**	7.347**
	(1.347)	(1.377)	(1.383)	(1.412)	(1.455)	(1.641)
Wald χ^2	231.07**	224.27**	199.61**	206.75**	210.96**	122.79**
AIC	1010.55	980.88	915.69	892.86	862.68	433.81
Number of clusters	66	63	61	58	56	42
Number of observations	665	643	601	577	562	281

Note: Values are coefficients with robust standard errors in parentheses, clustered on country.
† p<0.1, * p<0.05, ** p<0.01 (two-tailed test).

A4 Models with alternative operationalization of *pro-government militias*

TABLE A4.1 Ordered logit estimations for the level of human rights violations in post-conflict societies with alternative log of counts operationalization of *PGM inherited from conflict* and *PGM new to post-conflict*

	Dependent variable: Physical Integrity Rights Violations					
	Short term [5 years post-conflict]			Medium term [10 years post-conflict]		
PGM inherited from conflict$_{ln(count)}$	0.474*	0.412†	0.469*	0.427*	0.350†	0.435*
	(0.221)	(0.228)	(0.223)	(0.197)	(0.198)	(0.202)
PGM new to post-conflict$_{ln(count)}$	0.461	0.458	0.442	0.307	0.270	0.313
	(0.509)	(0.508)	(0.515)	(0.426)	(0.416)	(0.422)
Civil war$_{duration}$		0.003			0.002	
		(0.012)			(0.011)	
Civil war$_{intensity}$		0.425			0.625	
		(0.448)			(0.418)	
Gov. victory$_{termination}$			0.125			−0.048
			(0.388)			(0.351)
Settlement$_{termination}$			0.071			−0.088
			(0.275)			(0.260)
PKO$_{presence}$	0.369	0.367	0.380	0.237	0.219	0.247
	(0.281)	(0.278)	(0.270)	(0.237)	(0.234)	(0.236)
Executive Constraints	−0.184*	−0.195*	−0.187*	−0.163*	−0.176*	−0.157*
	(0.083)	(0.084)	(0.090)	(0.072)	(0.069)	(0.077)
Government Change$_{lag}$	0.164	0.154	0.164	0.450	0.448	0.443
	(0.408)	(0.397)	(0.409)	(0.299)	(0.301)	(0.302)
Physical Integrity violations$_{lag}$	1.759**	1.726**	1.759**	1.758**	1.719**	1.760**
	(0.231)	(0.236)	(0.233)	(0.178)	(0.174)	(0.178)
Free Media$_{lag}$	−0.428†	−0.376	−0.430†	−0.350†	−0.294	−0.337
	(0.244)	(0.241)	(0.251)	(0.205)	(0.198)	(0.210)
GDP$_{log}$	−0.115	−0.119	−0.115	−0.133	−0.134	−0.140
	(0.130)	(0.128)	(0.128)	(0.119)	(0.120)	(0.112)
Population$_{log}$	0.403**	0.418**	0.416**	0.405**	0.424**	0.397**
	(0.085)	(0.096)	(0.092)	(0.078)	(0.085)	(0.090)
Peace years	−1.714	−1.662	−1.698	−0.192	−0.217	−0.194
	(1.670)	(1.685)	(1.674)	(0.332)	(0.335)	(0.336)
Peace years$_2$	60.476	57.936	59.892	3.458	3.772	3.519
	(65.279)	(65.981)	(65.428)	(7.186)	(7.219)	(7.325)
Peace years$_3$	−6.392	−6.092	−6.335	−0.174	−0.190	−0.178
	(7.519)	(7.600)	(7.538)	(0.460)	(0.461)	(0.469)
Cut 1	5.112**	5.154**	5.292**	6.173**	6.179**	6.029**
	(1.658)	(1.659)	(1.787)	(1.305)	(1.297)	(1.429)
Cut 2	8.037**	8.086**	8.219**	9.053**	9.074**	8.910**
	(1.645)	(1.651)	(1.778)	(1.336)	(1.337)	(1.456)
Wald χ^2	177.70**	180.75**	202.58**	237.49**	233.98**	255.74**
AIC	664.93	667.68	668.75	1045.79	1045.61	1049.63
Number of clusters	68	68	68	68	68	68
Number of observations	429	429	429	681	681	681

Note: Values are coefficients with robust standard errors in parentheses, clustered on country.
† p<0.1, * p<0.05, ** p<0.01 (two-tailed test).

A5 Alternative model specifications

A5.1 Models with pro-government militias

TABLE A5.1 Order logit estimations for the level of human rights violations in post-conflict societies

	Dependent variable: Physical Integrity Rights Violations					
	Short term [5 years post-conflict]			Medium term [10 years post-conflict]		
PGM_{count}	0.211**	0.200*	0.212**	0.183*	0.158*	0.191*
	(0.076)	(0.083)	(0.078)	(0.076)	(0.078)	(0.077)
Civil $war_{duration}$		0.011			0.008	
		(0.013)			(0.012)	
Civil $war_{intensity}$		0.258			0.534	
		(0.440)			(0.411)	
Gov. $victory_{termination}$			−0.005			−0.143
			(0.391)			(0.346)
$Settlement_{termination}$			−0.054			−0.172
			(0.279)			(0.258)
$PKO_{presence}$	0.253	0.249	0.268	0.152	0.144	0.160
	(0.282)	(0.283)	(0.270)	(0.234)	(0.233)	(0.234)
Executive constraints	−0.165*	−0.176*	−0.161†	−0.147*	−0.165*	−0.138†
	(0.080)	(0.082)	(0.086)	(0.069)	(0.066)	(0.074)
$Government\ change_{lag}$	0.115	0.139	0.109	0.432	0.444	0.422
	(0.419)	(0.411)	(0.420)	(0.303)	(0.304)	(0.305)
Physical integrity rights $violations_{lag}$	1.822**	1.794**	1.824**	1.797**	1.760**	1.798**
	(0.235)	(0.239)	(0.237)	(0.182)	(0.177)	(0.181)
$Free\ media_{lag}$	−0.486*	−0.427†	−0.475†	−0.398*	−0.332†	−0.379†
	(0.243)	(0.240)	(0.249)	(0.202)	(0.196)	(0.208)
GDP_{log}	−0.155	−0.152	−0.159	−0.153	−0.149	−0.163
	(0.121)	(0.119)	(0.120)	(0.108)	(0.107)	(0.102)
$Population_{log}$	0.389**	0.376**	0.387**	0.399**	0.400**	0.381**
	(0.081)	(0.094)	(0.087)	(0.073)	(0.082)	(0.083)
Peace years	−1.716	−1.630	−1.725	−0.152	−0.171	−0.158
	(1.661)	(1.685)	(1.664)	(0.327)	(0.330)	(0.331)
$Peace\ years_2$	62.127	58.528	62.494	2.458	2.755	2.646
	(64.867)	(65.862)	(64.972)	(7.170)	(7.195)	(7.308)
$Peace\ years_3$	−6.705	−6.287	−6.747	−0.112	−0.128	−0.125
	(7.473)	(7.584)	(7.486)	(0.460)	(0.461)	(0.469)
Cut 1	4.853**	4.813**	4.793**	6.087**	6.031**	5.779**
	(1.608)	(1.605)	(1.705)	(1.257)	(1.242)	(1.349)
Cut 2	7.777**	7.744**	7.718**	8.967**	8.924**	8.662**
	(1.594)	(1.596)	(1.690)	(1.279)	(1.274)	(1.366)
Wald χ^2	176.71**	178.52**	201.94**	230.85**	228.63**	244.11**
AIC	670.25	673.00	674.20	1051.23	1051.44	1054.52
Number of clusters	69	69	69	69	69	69
Number of observations	437	437	437	689	689	689

Note: Values are coefficients with robust standard errors in parentheses, clustered on country.
† p<0.1, * p<0.05, ** p<0.01 (two-tailed test).

A5.2 Models with semi-official and informal pro-government militias

TABLE A5.2 Ordered logit estimations for the level of human rights violations in post-conflict societies—including *informal* and *semi-official* PGMs

	Dependent variable: Physical Integrity Rights Violations					
	Short term [5 years post-conflict]			Medium term [10 years post-conflict]		
PGM informal$_{count}$	0.337**	0.336**	0.338**	0.361**	0.335**	0.371**
	(0.085)	(0.091)	(0.087)	(0.085)	(0.080)	(0.086)
PGM semi-official$_{count}$	0.067	0.063	0.068	−0.024	−0.028	−0.017
	(0.138)	(0.139)	(0.139)	(0.129)	(0.129)	(0.130)
Civil war$_{duration}$		0.013			0.008	
		(0.013)			(0.012)	
Civil war$_{intensity}$		0.132			0.405	
		(0.403)			(0.340)	
Gov. victory$_{termination}$			−0.016			−0.161
			(0.386)			(0.335)
Settlement$_{termination}$			−0.045			−0.185
			(0.278)			(0.242)
PKO$_{presence}$	0.139	0.132	0.149	0.031	0.030	0.037
	(0.297)	(0.297)	(0.287)	(0.242)	(0.240)	(0.243)
Executive constraints	−0.170*	−0.180*	−0.167*	−0.155*	−0.169**	−0.144*
	(0.076)	(0.078)	(0.081)	(0.063)	(0.063)	(0.067)
Government change$_{lag}$	0.152	0.188	0.148	0.448	0.458	0.436
	(0.419)	(0.416)	(0.420)	(0.302)	(0.302)	(0.303)
Physical integrity rights violations$_{lag}$	1.811**	1.790**	1.813**	1.748**	1.721**	1.749**
	(0.234)	(0.238)	(0.237)	(0.181)	(0.179)	(0.181)
Free media$_{lag}$	−0.479*	−0.427†	−0.471†	−0.396*	−0.342†	−0.376†
	(0.237)	(0.236)	(0.246)	(0.199)	(0.196)	(0.208)
GDP$_{log}$	−0.164	−0.158	−0.167	−0.158	−0.154	−0.169
	(0.124)	(0.123)	(0.122)	(0.112)	(0.112)	(0.106)
Population$_{log}$	0.424**	0.401**	0.421**	0.450**	0.441**	0.430**
	(0.082)	(0.091)	(0.086)	(0.076)	(0.080)	(0.083)
Peace years	−1.744	−1.659	−1.753	−0.181	−0.193	−0.188
	(1.673)	(1.701)	(1.677)	(0.338)	(0.339)	(0.343)
Peace years^2	63.022	59.599	63.352	2.873	3.069	3.071
	(65.394)	(66.570)	(65.506)	(7.409)	(7.408)	(7.553)
Peace years^3	−6.816	−6.422	−6.853	−0.136	−0.147	−0.150
	(7.544)	(7.676)	(7.555)	(0.474)	(0.474)	(0.484)
Cut 1	4.988**	4.924**	4.928**	6.239**	6.162**	5.905**
	(1.613)	(1.612)	(1.721)	(1.211)	(1.200)	(1.332)
Cut 2	7.942**	7.886**	7.883**	9.165**	9.094**	8.835**
	(1.597)	(1.600)	(1.704)	(1.241)	(1.235)	(1.355)
Wald χ^2	192.85**	190.87**	225.90**	275.66**	284.72**	311.57**
AIC	668.43	671.22	672.41	1043.26	1044.81	1046.42
Number of clusters	69	69	69	69	69	69
Number of observations	437	437	437	689	689	689

Note: Values are coefficients with robust standard errors in parentheses, clustered on country.
† p<0.1, * p<0.05, ** p<0.01 (two-tailed test).

A5.3 Models with additional control variables

TABLE A5.3 Ordered logit estimations for the level of human rights violations in post-conflict societies based on Model 1 in Table 1—including control variables for *PGM onset*, the *Cold War*, *PGM former rebels*, *Military expenditure*

	Dependent variable: Physical Integrity Rights Violations			
PGM inherited from conflict$_{count}$	0.208**	0.234**	0.217**	0.227*
	(0.078)	(0.083)	(0.076)	(0.093)
PGM new to post-conflict$_{count}$	0.206	0.429†	0.272	0.278
	(0.302)	(0.252)	(0.297)	(0.294)
PKO$_{presence}$	0.342	0.215	0.338	0.388
	(0.280)	(0.278)	(0.283)	(0.314)
Executive constraints	−0.176*	−0.208*	−0.171*	−0.191*
	(0.084)	(0.088)	(0.083)	(0.092)
Government change$_{lag}$	0.089	0.149	0.153	0.175
	(0.399)	(0.427)	(0.411)	(0.454)
Physical integrity rights violations$_{lag}$	1.740**	1.708**	1.743**	1.743**
	(0.230)	(0.231)	(0.230)	(0.256)
Free media$_{lag}$	−0.455†	−0.577*	−0.463†	−0.356
	(0.249)	(0.267)	(0.247)	(0.280)
GDP$_{log}$	−0.120	−0.084	−0.121	−0.215
	(0.129)	(0.130)	(0.127)	(0.205)
Population$_{log}$	0.408**	0.375**	0.400**	0.289*
	(0.085)	(0.082)	(0.080)	(0.124)
PGM$_{onset,lag}$	0.474			
	(0.459)			
Cold War$_{dummy}$		1.170**		
		(0.453)		
PGM former rebel$_{dummy}$			0.132	
			(0.808)	
Military expenditure$_{log}$				0.131
				(0.127)
Peace years	−1.694	−1.899	−1.726	−2.169
	(1.682)	(1.663)	(1.687)	(1.820)
Peace years$_2$	60.313	65.127	60.905	77.262
	(65.435)	(64.633)	(65.816)	(70.714)
Peace years$_3$	−6.382	−6.725	−6.437	−8.318
	(7.517)	(7.423)	(7.572)	(8.100)
Cut 1	5.111**	5.553**	4.997**	4.560*
	(1.673)	(1.654)	(1.650)	(1.834)
Cut 2	8.046**	8.570**	7.939**	7.434**
	(1.671)	(1.639)	(1.645)	(1.832)
Wald χ^2	175.66**	170.22**	180.79**	144.53**
AIC	661.81	651.91	663.76	582.55
Number of clusters	68	68	68	67
Number of observations	428	429	429	378

Note: Values are coefficients with robust standard errors in parentheses, clustered on country. † p<0.1, * p<0.05, ** p<0.01.

A5.4 Models including post-conflict episodes with rebel victory

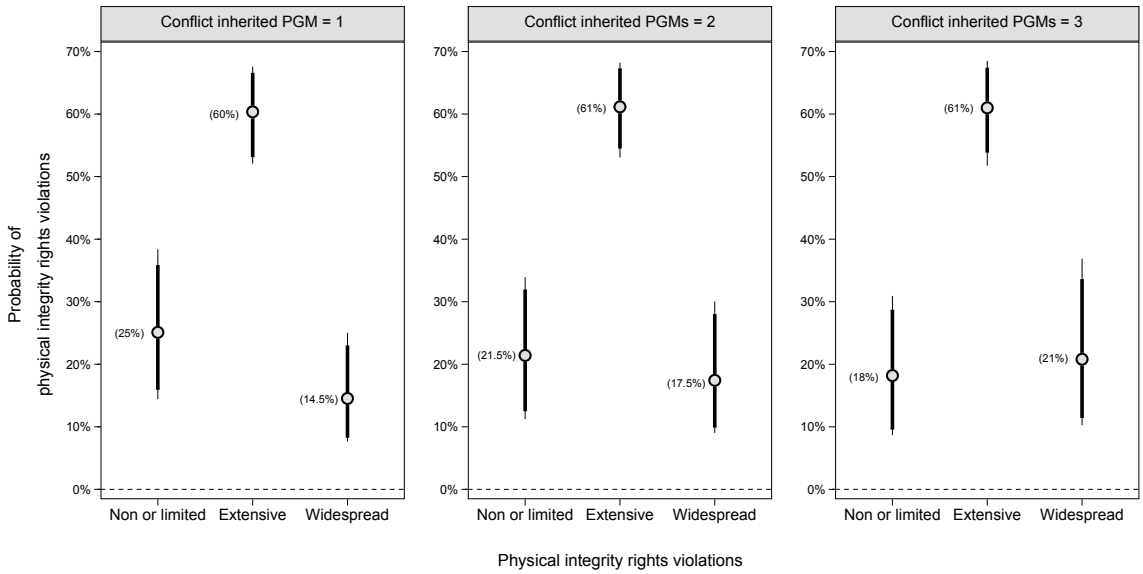
TABLE A5.4 Ordered logit estimations for the level of human rights violations in post-conflict societies—including post-conflict episodes where the preceding conflict ended with rebel victory

	Dependent variable: Physical Integrity Rights Violations					
	Short term [5 years post-conflict]			Medium term [10 years post-conflict]		
PGM inherited from conflict$_{count}$	0.249**	0.225**	0.248**	0.238**	0.207**	0.242**
	(0.079)	(0.081)	(0.080)	(0.075)	(0.073)	(0.076)
PGM new to post-conflict$_{count}$	0.336	0.352	0.330	0.182	0.178	0.197
	(0.295)	(0.293)	(0.296)	(0.237)	(0.232)	(0.234)
Civil war$_{duration}$		0.007			0.003	
		(0.012)			(0.011)	
Civil war$_{intensity}$		0.419			0.579	
		(0.404)			(0.403)	
Gov. victory$_{termination}$			0.085			−0.081
			(0.399)			(0.352)
Settlement$_{termination}$			0.044			−0.162
			(0.277)			(0.263)
Rebel victory$_{termination}$			0.153			0.166
			(0.391)			(0.361)
PKO$_{presence}$	0.422	0.413	0.438†	0.213	0.193	0.260
	(0.261)	(0.258)	(0.244)	(0.226)	(0.223)	(0.228)
Executive constraints	−0.177*	−0.187**	−0.177*	−0.139*	−0.150*	−0.128*
	(0.072)	(0.073)	(0.078)	(0.063)	(0.061)	(0.065)
Government change$_{lag}$	0.012	0.011	−0.012	0.341	0.333	0.294
	(0.331)	(0.329)	(0.343)	(0.237)	(0.241)	(0.245)
Physical integrity rights violations$_{lag}$	1.550**	1.514**	1.554**	1.585**	1.548**	1.593**
	(0.206)	(0.210)	(0.208)	(0.168)	(0.164)	(0.169)
Free media$_{lag}$	−0.431†	−0.377†	−0.430†	−0.301	−0.246	−0.291
	(0.226)	(0.221)	(0.238)	(0.185)	(0.181)	(0.194)
GDP$_{log}$	−0.138	−0.138	−0.136	−0.166	−0.164	−0.172
	(0.132)	(0.131)	(0.130)	(0.122)	(0.124)	(0.114)
Population$_{log}$	0.395**	0.397**	0.408**	0.380**	0.390**	0.384**
	(0.079)	(0.092)	(0.085)	(0.070)	(0.078)	(0.081)
Peace years	−1.368	−1.310	−1.356	−0.288	−0.301	−0.292
	(1.565)	(1.572)	(1.568)	(0.335)	(0.336)	(0.338)
Peace years^2	42.288	39.710	41.893	5.065	5.201	5.135
	(61.152)	(61.480)	(61.230)	(7.230)	(7.229)	(7.345)
Peace years^3	−3.981	−3.683	−3.945	−0.239	−0.245	−0.242
	(7.028)	(7.065)	(7.035)	(0.459)	(0.458)	(0.467)
Cut 1	4.421**	4.410**	4.628**	5.171**	5.165**	5.170**
	(1.563)	(1.563)	(1.754)	(1.289)	(1.277)	(1.423)
Cut 2	7.294**	7.291**	7.502**	8.002**	8.008**	8.004**
	(1.569)	(1.572)	(1.755)	(1.338)	(1.334)	(1.463)
Wald χ^2	187.82**	191.14**	216.26**	241.53**	243.61**	269.08**
AIC	745.29	747.63	751.13	1193.81	1193.76	1198.30
Number of clusters	74	74	74	74	74	74
Number of observations	476	476	476	763	763	763

Note: Values are coefficients with robust standard errors in parentheses, clustered on country.
† p<0.1, * p<0.05, ** p<0.01 (two-tailed test).

A6 Predicted probabilities of *repression* with conflict *inherited pro-government militias*

FIGURE A6.1 Predicted probabilities of *repression* with conflict *inherited pro-government militias* in the fifth year of post-conflict peace



Note: The simulations are based on Model 1 in Table 1. We calculate substantive effects using a scenario in which a country reaches the fifth year of post-conflict peace. The graphs show the predicted probabilities of *repression* for post-conflict countries with 1, 2 or 3 *inherited PGMs* respectively. Other control variables are held at their mean (continuous variables) and median (categorical variables). Thin and thick vertical lines indicate 95% and 90% confidence intervals.

A7 Coding of Pro-Government Militia targets

The PGMD uses news sources provided in LexisNexis as information. This means, it relies on the sources to mention the type of target. Whenever a source reports about a PGM targeting an individual or a group, it is recorded as a target. Coding every single mention of a target and using the group as the unit of analysis reduces the risk that types of targets are missed. Given the extensive categories of possible targets in the PGMD, civilians as targets are likely the result of personally motivated violence by the militia members. If an individual is targeted because she belong to a specific ethnic or religious group, or a potentially threatening profession, such as a journalist or peacekeeper, they are specifically identified. The first bar in Figure 4 captures only those militias that exclusively targeted civilians and no other groups of targets that have specific characteristic.