Fratricidal Coercion in Modern War

Jason Lyall and Yuri M. Zhukov

Abstract Armies sometimes use fratricidal coercion — violence and intimidation against their own soldiers — to force reluctant soldiers to fight. Though quite common historically, we know little about how it affects battlefield performance. We study fratricidal coercion using a mixed-method strategy, drawing on (1) monthly panel data on Soviet Rifle Divisions in World War II, built from millions of declassified personnel files; (2) paired comparisons of Rifle Divisions at the Battle of Leningrad; and (3) cross-national data on 526 land battles and war outcomes from 75 conflicts (1939–2011) to assess generalizability. We offer three sets of empirical findings. First, coercion keeps some soldiers from fleeing the battlefield, but at the cost of higher casualties and reduced battlefield initiative. Second, wartime and prewar coercion (e.g. mass repression, officer purges) affect soldiers' behavior in similar, mutually reinforcing ways. Third, the resolve-boosting, initiative-dampening effects of fratricidal coercion generalize across belligerents and wars. Fratricidal coercion generates compliance through fear, compelling soldiers with variable levels of resolve to conform to a uniform standard of battlefield behavior. But the net utility of this approach is dubious. On balance, countries employing fratricidal coercion are less likely to win their wars.

Armies sometimes use shocking brutality to force reluctant soldiers to fight. In Ukraine, Russia's armed forces and associated paramilitary formations have reportedly used artillery fire against surrendering soldiers;[1] tortured and mock-executed junior officers;[2] imprisoned men in open-air pits for disciplinary infractions;[3] denied medical assistance to wounded soldiers;[4] executed deserters with sledgehammers;[5] and threatened to shoot retreating soldiers during "meat storm" frontal assaults.[6]

1. "The Russian Soldier Who Surrendered to a Ukrainian Drone," *Wall Street Journal*, 14 June 2023.
2. "Russian Officer Accuses Wagner Group of Abductions, Torture of Russian Military Personnel," *RFE/RL*, 8 June 2023.
3. UK Ministry of Defence Intelligence Update, 30 April 2023.
4. "Deadly and disposable: Wagner's brutal tactics in Ukraine revealed by intelligence report," *CNN*, 26 January 2023.
5. "Video shows sledgehammer execution of Russian mercenary," *Reuters*, 13 November 2022.
6. UK Ministry of Defence Intelligence Update, 4 November 2022; "'Execution on the Spot' - Russian Commanders Threatening to Shoot Troops for Refusing to Fight," *Kyiv Post*, 14 March 2023; "General Staff: Russian national guard shoots own soldiers for planning to surrender to Ukraine," *The Kyiv Independent*, 8 January 2023.

doi:10.1017/xxxxxxx xxxx

"They placed barrier troops behind us," said one soldier, "and they weren't letting us leave our position."[7] Another soldier declared, "if we go back, they'll shoot us."[8]

These anecdotes are not historical outliers. Success in battle, and states' ability win wars and engage in coercive diplomacy, rests on individual soldiers' willingness to fight. Armies turn to fratricidal coercion — the threat or use of violence against reluctant soldiers — to make outside options, like fleeing or surrendering, less appealing.

How fratricidal coercion affects soldiers' battlefield behavior remains a subject of debate.[9] Recent quantitative research has exposed the historical ubiquity of this practice, but has not directly explored its behavioral impact on soldiers. Nearly all empirical work has focused on prewar, not wartime, state coercion.[10] For example, at the cross-national level, Lyall (2020a) shows that states whose ethnic minorities experienced greater prewar discrimination fared poorly in battle. At the sub-national level, Rozenas, Talibova, and Zhukov (2024, hereafter RTZ) show that Soviet soldiers exposed to more political repression prior to World War II were more likely to comply with orders, but also less likely to show initiative. We know surprisingly little about how *wartime* fratricidal coercion affects battlefield behavior.

Our research note builds on this prior work by incorporating fratricidal coercion into empirical models of combat motivation in conventional, interstate war. We use declassified Soviet army personnel records and divisional histories from World War II (1941-1945) to explore how the presence of secret police (NKVD) "Special Sections" affected battlefield performance across military units, including casualties, disappearances, and desertion. These tactical and operational dynamics, as we show, are not just important in and of themselves — they are predictive of strategic-level victory and defeat in war. We study how prewar mass repression and officer purges might have amplified or attenuated these wartime incentives. We then consider how unique the Soviet experience was in a cross-national context, using data on blocking units across 526 battles in 75 wars (1939-2011).

Consistent with Lyall (2020a) and RTZ's findings on prewar discrimination and repression, we find that fratricidal coercion bolsters soldier compliance but does not improve — and, in key ways, worsens — battlefield performance. Red Army divisions with larger NKVD contingents witnessed lower soldier indiscipline (i.e. fewer disappearances, desertions, defections, surrenders), but also higher casualties and fewer medals for valor — an indicator of soldier initiative. We supplement these

7. "Russian soldiers say commanders used 'barrier troops' to stop them retreating," *The Guardian*, 27 March 2023.

8. "Tattered and Bandaged, Russian POWs Describe Ukraine's Offensive," *Wall Street Journal*, 17 June 2023.

9. On the importance of coercion for recruitment and cohesion, see Ardant du Picq 1904; Keegan 1976; Howard 2009; Duffy 1987; Merridale 2005; Fitzpatrick 2000; Best 1988, 32–33. For critiques of this literature, see Berkovich 2017, 17–54; Hamner 2011, 3; McLauchlin 2020, 34.

10. Examples include Henn and Huff 2021; Huff and Schub 2021; Rozenas and Zhukov 2019; Lyall 2020a; Rozenas, Talibova, and Zhukov 2024. A notable exception is Chen 2017, who studies the effect of court martial death penalty commutations on British soldiers in WWI.

analyses with matched qualitative comparisons of Soviet divisions, and find that larger NKVD sections may have helped drive reluctant soldiers forward, resulting in higher death rates but fewer medals for bravery. We also find that wartime and prewar coercion affected soldiers' behavior in similar, mutually reinforcing ways. Fratricidal coercion made a greater difference in units whose soldiers were more exposed to prewar repression (a claim RTZ make, but do not test), while wartime coercion may have enhanced the coercive effects of prewar repression. Our cross-national tests yield similar patterns: blocking units are associated with fewer missing soldiers but also higher casualties and worse loss-exchange ratios. We further demonstrate that belligerents employing fratricidal coercion are less likely to win wars.

Theory

We define *fratricidal coercion* as the threat or use of physical violence by military authorities and their representatives against their own soldiers in wartime. Designed to deter and punish desertion and other behavioral transgressions, fratricidal coercion differs in three ways from other forms of violence within military organizations.

First, fratricidal coercion is intentional, unlike "friendly fire" or (non-coercive) "fratricide," which denote accidental actions.[11] Second, fratricidal coercion is top-down (i.e. carried out by formal authorities), unlike bottom-up "fragging" actions by troops against commanding officers. Third, it is extrajudicial, sidestepping or replacing routine procedures of military justice.

Fratricidal coercion can include lethal and non-lethal measures, from publicly executing soldiers to forcibly returning them to the front, or simply establishing a visible deterrent presence. In some instances, these coercive actions are the responsibility of specialized units ("blocking detachments") with separate recruitment procedures. These units station themselves behind front-line positions and patrol rear areas to prevent desertion or surrender. Not all efforts reach this level of sophistication, and desperate commanders frequently use ad hoc measures to push reluctant soldiers forward and cauterize the flow of deserters. We focus here on blocking detachments as the clearest example of fratricidal coercion.

Following Lyall (2020a) and RTZ, we assume that soldier resolve is variable in wartime.[12] Resolve depends on intrinsic factors (e.g. personal duty, honor, ideology) and extrinsic ones (e.g. rewards, punishment). Some considerations may predate war,

11. *U.S. Army Field Manual 100-5: Operations* (Glossary-4) defines "fratricide" as "the employment of friendly weapons... with the intent to kill the enemy..., which results in unforeseen and unintentional death or injury to friendly personnel" (cgsc.contentdm.oclc.org/digital/collection/p4013coll9/id/49/). While the term "fratricide" is not ideal in application to increasingly gender-diverse modern armies, we adopt it here due to the absence of a neutral alternative in extant military terminology (e.g. "siblicide").

12. This represents a significant departure from existing theories of military effectiveness that assume the existence of cohesive units. On this point, see Talmadge 2015, 7.

like exposure to state-sanctioned discrimination or repression.[13] Others stem from wartime fighting conditions. Fratricidal coercion offers a potential means to increase soldiers' extrinsic motivations to fight when intrinsic motivation is low.

We argue that the effect of fratricidal coercion on resolve is not uniform. Expectations of brutality can deter intrinsically reluctant soldiers from fleeing by updating their beliefs about the consequences of failing to fight ("shirkers will be punished") and the choice they face ("I am better off not shirking"). However, fratricidal coercion may compel otherwise eager, intrinsically resolved soldiers to dampen their zeal — on the expectation that *any* perceived deviations from norms of appropriate conduct (including over-performance) could be punished. Coercion, then, makes soldiers' combat resolve more uniform: malcontents become more compliant with orders, and true believers are less likely to exceed orders.

Observable Implications

We anticipate that, as fratricidal coercion increases in a unit or army, fewer soldiers will shirk their duties (Hypothesis 1), more soldiers will follow orders (Hypothesis 2), and fewer soldiers will take initiative beyond these orders (Hypothesis 3).

Since we cannot observe these outcomes directly, we follow the literature in viewing different categories of casualties as empirical realizations of resolve.[14] As a proxy for shirking, we look at how many soldiers went missing in action (MIA), deserted, or surrendered. Such cases should decline as fratricidal coercion forecloses escape opportunities. As a proxy for following orders, we use numbers of killed (KIA) or wounded in action (WIA). Because combat inflicts physical trauma, commitment to one's combat mission implies a tacit willingness to risk life and limb. As a proxy for initiative, we look at how many soldiers received medals for valor. We consider the validity of these measures below.

Finally, we expect the behavioral effects of wartime coercion to be similar to those of prewar repression: namely, both should lead to more homogeneous behavior by actors with variable preferences toward fighting (Hypothesis 4). While RTZ do not study fratricidal coercion, they speculate that "soldiers who had experienced state violence more intimately as civilians may be more responsive to coercive measures on the battlefield (p.47)." We investigate the empirical basis for this claim below.

Empirical Strategy

We adopt a two-part mixed-method empirical strategy. First, we draw on micro-level data to explain how fratricidal coercion affected battlefield outcomes across combat units in the same army. Second, we assess the cross-national generalizability of our

13. Lyall 2020a; Rozenas, Talibova, and Zhukov 2024.
14. Costa and Kahn 2003; Ager, Bursztyn, and Voth 2022; Rozenas, Talibova, and Zhukov 2024.

claims by studying how blocking detachments shaped the outcomes of 526 land battles in 75 wars since 1939.

Micro-level Analysis: Soviet Rifle Divisions, 1941-45

We begin our investigation by creating a new unit-level dataset on fratricidal coercion within the Soviet Workers' and Peasants' Red Army (RKKA) during WWII. Our dataset tracks 1,048 RKKA divisions over 48 months (June 1941–May 1945), including all active formations that directly participated in combat, and excluding training and reserve divisions. Rifle Divisions (infantry) represent 78% of these observations.[15]

Each division (8,000-12,000 troops, on average) reported to an Army — a combined arms unit comprising three to five divisions, along with air defense, artillery, reconnaissance and other supporting units. In wartime, armies reported to fronts, each containing three to five armies. These nestings shifted during WWII, with armies reassigned from one front to another, and divisions transferring between armies. Unit designations were not unique, as the high command regularly disbanded, reorganized, renamed, and renumbered its divisions. Given this complexity, we treat each division-army nesting as a separate, unique unit. Since units saw combat at different stages of the war — and virtually none were active for all 48 months — our dataset is an unbalanced panel of 21,241 division-months. We have information on combat operations for 16,330 (77%) division-months.[16]

We measure our dependent variable, battlefield performance, using RTZ's data on 34 million RKKA soldiers who served in WWII. These data integrate 105 million personnel records from the Russian Ministry of Defense's *People's Memory* archive,[17] including information about promotions, decorations and, central for our purposes, each soldier's fate (i.e. discharge, transfer, death). We have complete personnel records for 8,483,491 soldiers, including unit names, dates, and reasons for discharge, allowing us to match records to specific divisions and months.[18] We matched soldiers to units and calculated the proportion of each division's monthly losses attributable to death, injury, missing in action, capture, desertion, and punishment for misconduct.[19] To measure initiative in battle, we calculated the proportion of each division's personnel who received a valor decoration each month.[20] Later in this note, we provide

15. We compiled this list using monthly orders-of-battle from Fes'kov, Kalashnikov, and Golikov 2003.

16. This includes Rifle Divisions that participated in multiple battles per month.

17. pamyat-naroda.ru, accessed October 19, 2024.

18. Missingness is mostly due to imprecise information (e.g. missing unit details), illegible handwriting, or incomplete data entry for some fields (e.g. listing year of discharge but not month). Any inferences we draw rest on the assumption that missingness is random across soldiers.

19. The "missing in action" category deserves special attention. See our discussion in Appendix Section A1. Soldiers who were honorably discharged or reassigned (i.e. finished their tours without death, injury, or misconduct) represent less than half of monthly discharge records (44.5%).

20. Following RTZ, we include only medals recognizing individual performance in risk-to-life situations (For Courage, For Battle Merit, Order of Glory, Hero of the Soviet Union), and exclude career service

cross-national evidence to show that these tactical-level dynamics are predictive of strategic-level victory and defeat in war.

To assess the impact of fratricidal coercion on each battlefield outcome, we collected new data on NKVD personnel who served in Special Sections (OO) and SMERSH counterintelligence units, which were embedded in the regular army and had authority to bypass military tribunals, detain and execute suspected deserters and stragglers. OO's were active from the start of the war. Their duties intensified after September 1941, when Stalin ordered that blocking companies be organized in all rifle regiments. Regular soldiers staffed these companies. OO officers commanded them. Their mission was to patrol rear areas and "liquidate instigators of panic and flight."[21]

Although most primary sources on the actions of blocking units remain classified,[22] we can measure the numerical presence of NKVD officers in each division. Our assumption is that units with a larger counterintelligence presence saw more intense monitoring and enforcement. Using Memorial's NKVD archive of service histories for 41,383 NKVD officers, we identified 25,079 who served in OO or SMERSH during the war, the combat units to which they were assigned, and when.[23]

The number of OO/SMERSH personnel per division-month ranged from 0 to 243 (303rd Rifle Division, 7th Guards Army, 2nd Ukrainian Front, November 1943), with a mean of 10 officers. This number excludes rank-and-file troops who served in blocking companies under these officers' command (roughly 100 soldiers each). On average, there was one OO/SMERSH officer for every 1,376 troops.

A potential concern is that NKVD officers had many duties beyond fratricidal coercion (e.g. political education, surveillance). Our measure therefore excludes political officers responsible for ideological training (*politruk*, *zampolit*), and includes only those tasked with identifying and punishing disloyal soldiers (OO/SMERSH).

The data reveal significant variation in NKVD presence across the Red Army, which does not always correspond to operational tempo. For example, almost three times as many OO/SMERSH officers rotated through the 1st Ukrainian Front as had served in the 3rd Ukrainian Front (a difference of more than 2 standard deviations), although these units participated in a similar number of battles (416 and 339, under .33 standard deviations apart) over the same time period (see Appendix Section A1).

What explains this variation in NKVD presence? Supplementary analyses (Appendix Section A1) suggest that the NKVD may have assigned more personnel to units where they expected higher rates of flight. First, there were more NKVD officers in army branches with more opportunities for contact with the enemy and crossing of front lines (e.g. infantry). Second, units with more soldiers from "politically suspect" backgrounds (e.g. minorities, peasants, older soldiers with longer exposure

awards, commemorative awards, battle participation awards and decorations awarded collectively to units. In an average division-month, 16.4% of personnel received at least one such decoration.

21. Statiev 2012, 487–488.
22. Statiev 2012; Daines 2008; Lyall 2017.
23. Memorial 2017.

to pre-revolutionary institutions) had more NKVD officers. Third, NKVD presence grew over time, peaking when the RKKA was deep in Germany in 1945. Finally, the NKVD sent more officers to units whose soldiers were exposed to greater prewar repression — as we discuss in more detail below.

Statistical Analysis of NKVD Presence and Soviet Performance

Did fratricidal coercion matter for Soviet battlefield performance? Figure 1 reports estimates of the effect of NKVD presence on seven types of battlefield outcomes. Each line reports a coefficient estimate and 95% confidence interval from a separate three-way fixed effects model, regressing the percentage of a division's monthly losses (i.s. KIA, WIA, MIA, POW, desertion, punishment) and medals on the number of OO/SMERSH personnel assigned to the unit at that time (see Appendix A2).[24] All models account for a unit's average demographics (age, ethnicity, geographic diversity, urbanization in soldiers' hometowns), and allows each unit, battle, and month to have a different baseline level of losses.[25]

Figure 1 illustrates several key findings.[26] First, there is a significant negative relationship between fratricidal coercion and key categories of flight. Doubling OO/SMERSH presence within a division is associated with a 1.4 percentage point decline in the share of troops reported as missing in action in a given month, a .2 percentage point decline in troops reported as prisoners of war, and a .06 percentage point decline in desertions. The magnitude of these shifts is substantively meaningful — equivalent to about 2 fewer soldiers missing in an average division-month.[27]

The negative result with respect to POWs is striking. Considering that Soviet commanders routinely reported captured troops as MIA (Appendix A1), the negative relationship between NKVD presence and MIAs could indicate either a substitution effect (e.g. shift in reporting) or a genuine decline in POWs. Since the drop in reported MIAs is not accompanied by a rise in reported POWs, the first scenario seems unlikely.

Second, fratricidal coercion came at the cost of higher fatalities. Doubling OO/SMERSH presence increased the share of troops killed by .52 percentage points —

24. We use absolute numbers of NKVD personnel, on the assumption that combat units are of similar division-level strength. In Appendix A3, we consider how variation in unit strength affects our estimates.

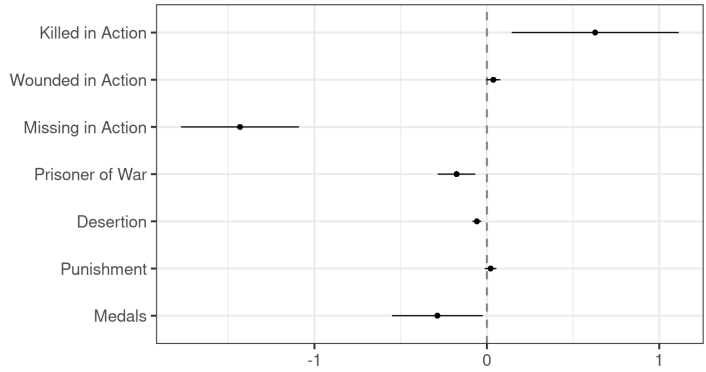
25. Our baseline specification is

$$y_{ijt}^{(k)} = \log(\text{NKVD}_{it})\beta + \mathbf{X}_{it}\gamma + \text{unit}_i + \text{battle}_j + \text{month}_t + \epsilon_{ijt} \quad (1)$$

where i indexes divisions, j indexes battles, and t indexes months (1-48). y_{ijt} is the percentage of a division's monthly losses in category $k \in \{\text{KIA, WIA, MIA, POW, Desertion, Punishment, Medal}\}$. NKVD_{it} is the number of OO/SMERSH personnel assigned to i, t, log-transformed to reduce right skew. $\mathbf{X}_{it}$ is a matrix of covariates representing the average demographics of i, t. We weigh division-months by number of personnel records, because percentages are more precise when more records are available.

26. Point estimates represent the impact of doubling NKVD presence on the percentage point change in an average division's battlefield outcomes, by category.

27. $137 \times .014 = 2$, where 137 is the average number of MIA's per division-month.



Notes: Horizontal axis represents estimated percentage point change in outcome (as share of a division's monthly losses) associated with doubling NKVD presence in a Rifle Division. See Table A3.3 for full estimates.

FIGURE 1. *How did NKVD Presence Impact Soviet Battlefield Performance?*

approximately 3 additional deaths each month for an average division.[28] For every two soldiers the NKVD potentially deterred from fleeing, three stayed and died fighting.

Third, in divisions with more NKVD officers, a significantly smaller share of soldiers received medals for valor (−0.34 percentage points). This pattern challenges the idea that coercion universally increases combat resolve. Had this been true, we would observe not only less flight (and more fatalities), but also more acts of bravery. Instead, fewer soldiers went beyond the call of duty when the NKVD was present.

We conduct a battery of robustness checks (Appendix A3) to address possible inferential challenges, including placebo tests that randomize allocation of NKVD officers; sub-sample analyses of officers vs. enlisted personnel; time-varying coefficients that capture coercion's changing effects; temporal splines to account for organizational challenges facing newer units; simulations to test for unobserved variation in unit strength; and non-independence between divisions. In almost all cases, our results are unchanged. We also consider the plausibility of several alternative interpretations of our findings, like ethnic/class discrimination and reporting biases in Soviet records.

Evidence from Matched Soviet Rifle Divisions

We marshal qualitative evidence to detail how NKVD Special Sections generated a credible threat of fratricidal coercion and, in turn, how they affected battlefield behavior. We expect that (1) soldiers and commanders were aware of these units' presence (or absence) in their divisions; (2) the threat they posed appeared credible; (3)

28. 549 × .0052 = 3, where 549 is the average number of KIA's per division-month.

they had the capacity to close escape routes; and (4) their presence altered commanders' tactical decisions, leading to the embrace of mass-casualty frontal assaults.

To detail this causal logic, we draw on a paired comparison of two similar Red Army Rifle Divisions that fought at the Battle of Leningrad (9 July–26 October 1941, Figure 2). We used statistical matching to identify pairs of Rifle Divisions that were balanced on almost all observable characteristics, but diverged in NKVD presence (Appendix A4). The pair we selected, the 168th and 90th Rifle Divisions, shared many key traits that might affect battlefield performance, including number of assigned personnel, equipment, organization, and chain of command (55th Army). Yet the 168th had 57 NKVD officers assigned to it, while the 90th had just one NKVD officer. We focus on the critical September-October 1941 phase of the Battle of Leningrad, and trace each division's performance using declassified army, division, and regimental war logs, soldiers' wartime letters and interviews,[29] newspaper articles from embedded journalists, maps, and RKKA personnel records.[30]

By early September, each Rifle Division, reeling under German assaults, had begun fighting retreats toward Kolpino, a hamlet meant to anchor the defense of Leningrad's southern approaches (Figure 3). Arriving in mid-September, the divisions found themselves side-by-side in hastily-organized defensive operations to prevent further German advances. Ordered to hold at all costs, the units were withdrawn from the frontline on 25 October.

These eight weeks of combat offer a window into how blocking detachments affected efforts to instill discipline and maintain order amid battlefield chaos. The 168th's sizable Special Section, for example, was tasked with stiffening the resolve of reluctant soldiers through the threat, and actual practice, of shooting deserters. Senior leaders relied on these units to maintain order during fighting retreats, when panicked soldiers, often cut off from their officers, might have set off a cascade of desertion or surrender that could unravel the entire division. As one field-grade officer noted:

> [Around 21 September], we received an order from the Supreme Commander — those who abandoned their positions without authorization would be shot. . . [NKVD] implemented the order immediately and began a merciless struggle against alarmists and deserters. Placing checkpoints near roads was especially useful. Groups of deserters retreating in disarray along the road to Leningrad were stopped by blocking detachments and divisional headquarters staff and sent back to the front. Order and discipline were restored completely.[31]

29. Petrikeev 1994; Panteleev 2006.

30. We cite Leningrad Front (*LenF*) records using the Central Archive of the USSR Ministry of Defense (hereafter, TsAMO)'s Fond/Opis'/Delo/List classification system. For divisional narratives, we draw in part on the 55th Army's war-logs, especially "Khronika sobytii na LenF (s 11.7 po 29.8.41 goda)," TsAMO F. 217, O. 1221, D. 204 and "Zhurnal boevykh deistvii voisk 55A," TsAMO F. 411, O. 10189, D. 38.

31. Letter by Lt. Colonel L.I. Malikin redacted from Petrikeev 1994 and reproduced at http://centralsector.narod.ru/arch/168_2.htm.

By contrast, with only a skeleton blocking detachment, the 90th fell apart under German attacks in September, struggling just to get to Kolpino in some semblance of order. Retreats were chaotic, indiscipline high. Orders to counterattack were ignored. "It was very difficult," one soldier remembered, "there was no leadership, no one knew the situation and, most importantly, there was no communication between officers and their men." One rifleman recalled a common joke that their officers should be arrested so they could more easily find them.[32] Absent a credible threat of punishment, and with officers unable to monitor soldiers amid the noise and confusion, some soldiers doffed their uniforms to escape German patrols in civilian clothes.[33] Desertion became more common.[34] Even when the frontlines stabilized in October, soldiers and officers continued to slip away. Those who remained openly broached surrender. "Our situation is without hope," wrote one soldier.[35]

Where more NKVD officers were present, Special Sections were better able to close escape routes. While some soldiers managed to slip through the cordon — especially during fighting retreats in September — the 168th's blocking detachment managed to clamp down on most escape routes to the rear. Commanders and soldiers recall frequent encounters with Special Sections engaged in this task.[36] By contrast, we found only a single recorded instance where fleeing soldiers from the 90th came across a Special Section, an encounter they described as unexpected.[37] Standing orders instructed the 90th's soldiers to avoid roads and move through forests, compounding the NKVD's monitoring problem.[38] NKVD were too few in number, and the division too scattered, for deterrence to be credible.

Substantial evidence also indicates that NKVD presence encouraged the use of costly frontal assaults to bleed German forces through human wave attacks. The 168th's soldiers, many of whom reported reaching their "breaking point," were thrown into counteroffensives and forced to advance through fear of punishment.[39] The division's commanding officer, General Bondarev, ordered numerous local counterattacks without artillery preparation, even when such fires were available and considered necessary by his subordinates.[40] Special sections drove reluctant soldiers forward, as journalists wrote glowing reports of their new-found resolve. "Each of the soldiers in Bondarev's division fought literally as ten men," *Krasnaya Zvezda* reported,

32. Letter by N.A. Kurganovich in Panteleev 2006, 213–16.
33. *Ibid*., p.199.
34. Letter by I.F. Andrianov in Panteleev 2006, 52.
35. Letter by P.K. Mishura in 198.
36. Letter by L.I. Malikin, redacted from Petrikeev 1994 and reproduced at http://centralsector.narod.ru/arch/168_2.htm.
37. Letter by N.A. Panteleev, reproduced in Panteleev 2006, 301–04.
38. Letter by V.I. Volkov, reproduced in 231–32.
39. See especially the letter by I.A. Ivanutin, "Metkie zalpy artilleristov-bondarevtsev," in Petrikeev 1994, 193–95. For an offiical (and graphic) report of soldier living conditions in early September, see "Vashe razporyazhenie mne sovershenno neponyatno," TsAMO F. 411; O. 10189; D. 14, L. 2.
40. Sycheva and Malakhova 1954.

FIGURE 2. *9 July – 26 October 1941*

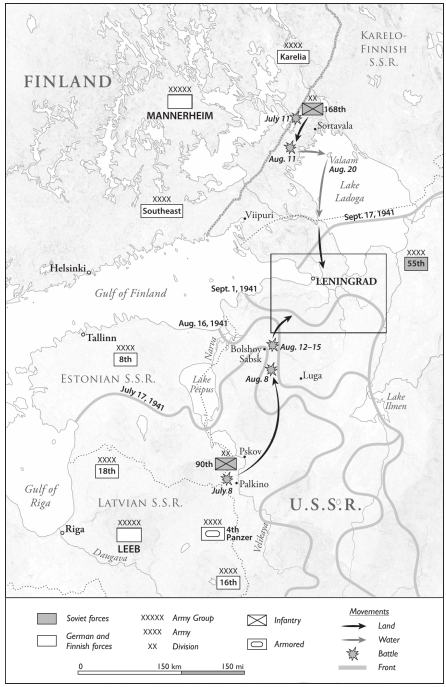


FIGURE 3. *September 1941 (Detail)*

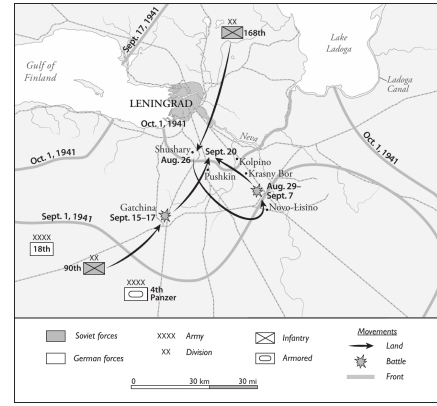


FIGURE 4. *October 1941 (Detail)*

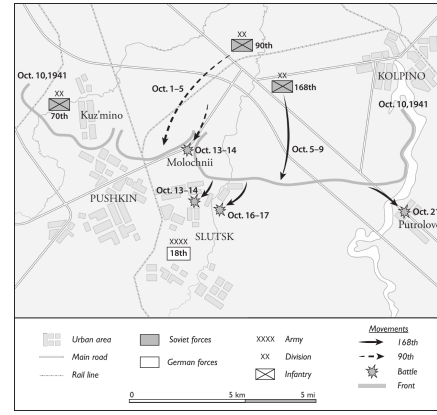


FIGURE 5. *The 90th and 168th Rifle Divisions at the Battle of Leningrad (July–October, 1941)*

TABLE 1. *Paired Comparison: Battle of Leningrad (9 July–26 Oct.1941)*

	168th RD	*90th RD*	*Difference*
NKVD OO/SMERSH	57	1	56
Exact Matching			
Front	Leningrad	Leningrad	
Army	55th	55th	
Unit Type	Rifle Division	Rifle Division	
Additional Unit Traits			
Formation Date	1939	1936	
Formation	Second	Second	
Soldiers (*Approx.*)	10,000–13,654	10,000–10,258	0–3,396
Artillery/Howitzers	38	42	4
Anti-Aircraft Guns	8	4	4
Anti-Tank Guns	54	48	6
Vehicles	771	690	81
Initial Front (Linear km)	60–65	50–52	10–13
Force to Space Ratio (Linear km)	167–210	198–200	21–10
Force to Force Ratio (USR:GER)	1:2.5–1:3	1:2.5–1.3	0
Soldiers Per Vehicle	13–18	14–15	1–3
Support %	37%	31%	6%
Battlefield Performance			
KIA	33.87%	18.9%	14.97%
MIA	33.64%	34.12%	-0.48%
POW	3.66%	20.21%	-16.55%
Punish	1.14%	1.84%	-0.7%
Div. Commanders KIA	0	3	-3
Medals for Valor	1.83%	4.99%	-3.16%

Notes: Battlefield performance indicators are derived from October 1941 declassified personnel records for the 168th (N=437) and 90th (N=381) Rifle Divisions. Estimates of divisional strength are drawn from official tables of organization and measured on the eve of the Battle of Leningrad (see Askey 2016, 526, 548).

"and they held out without letting the enemy pass." One German prisoner recounted, "We were scattered and put to flight [at Tosno] by this frightful division that wasn't afraid of artillery or mortar fire. . . The Russians fought like lions for every meter of ground."[41] These costly assaults introduced new vulnerabilities. Without adequate battlefield preparation, the 168th's command post was repeatedly endangered as it held fast while other divisions retreated around it.[42]

Despite heavy losses, the 168th was continually engaged in meat-grinder counteroffensives. In early October, the 168th received orders to take up new positions southeast of Kolpino, astride major road and railway networks (Figure 4). Fighting its way forward, bitterly and in close quarters, the division drove German forces back at great cost. By 10 October, the 168th had carved out a 12–15 kilometer perimeter that protected the advances to Kolpino and Slutsk.[43] In rapid succession, the division launched counterattacks at Pushkin (13–14 October), Slutsk (16–17 October), and Putrolovo (21 October), slowing the Germans' advance to a bloody crawl.

By contrast, the 90th — which lacked the coercive infrastructure to drive its soldiers forward — recorded only a single counterattack over a six week period from mid-September to late October. Commanders preferred to hunker down in defensive positions, fearful that advances would create new opportunities for soldiers to slip away. For example, in early October, the 90th received orders to fight its way to new defensive positions southwest of Kolpino (Figure 4). The under-strength division limped its way south, leaving a paper trail of increasingly desperate requests for soldiers and (especially) officers, weapons, air support, food, and, most notably, reinforcements for its Special Section. Soldiers took this opportunity to desert or go missing in large numbers, many sneaking away at night. The 90th recorded fewer battlefield casualties than the 168th, but higher rates of desertion, POWs, and missing. One status report from 10 October, signed by the 90th's commander and political commissar, claimed that only 600 soldiers remained available for duty.[44] The division's official history mostly passes over this period in silence, noting that "it was a most difficult, hungry, and unpleasant time" and "there was never a worse situation."[45]

Both units, or what remained of them, were ordered from the frontlines on 25 October 1941. As Table 1 demonstrates, their battlefield performance in September-October 1941 was sharply different. In September, the 168th's personnel records reported a 30.6% KIA and 54% MIA rate, compared to 11.6% KIA and 73% MIA in the 90th. Disarray and indiscipline was also costly for the 90th: three of its commanding officers were killed in battles in only three months. One survived only two days.[46] In October 1941, the 168th again reported a much larger share of soldiers

41. Quoted in Petrikeev 1994, 37.
42. See N.S. Zhitenev, "Komandiry – Svetlaya pamyat'," in 17, 179.
43. "Otchetnaya karta LenF na 10.10.41.g.," TsAMO F. 217, O. 1221, D. 473; 40.
44. "Svedeniya," 18.10.1941g, TsAMO, F. 1253, O. 1, D. 54.
45. Panteleev 2006, 12.
46. These commanders were Colonel I.I. Plyonkin (7 July-10 August); Colonel A.A. Dar'in (10-11

KIA (33.9%) than the 90th (18.9%). The trend reverses for prisoners of war: the 90th reported 20.2% of their losses as POWs, compared with 3.7% from the 168th. 168th was also able to launch counter-offensives and retreat in reasonably good order, which we ascribe to the presence of blocking detachments. The only category where the 90th outperformed the 168th was in individual medals for valor (5% versus 1.8%). Even this is problematic: it was the breakdown in order within the 90th that created the space for individual initiative, as many soldiers fought tenaciously to force their own escape, rather than to reverse gains by German forces.[47]

Prewar Repression or Wartime Coercion?

Can we distinguish the battlefield effects of wartime coercion from the legacy of prewar repression, like mass terror or officer purges? Following RTZ, we define *civilian repression* as the number of political arrests that occurred within 10 kilometers of a soldier's birthplace in 1936-38, averaged across all soldiers assigned to a unit-month.[48] We define *purges* as the number of officers serving in a given unit, whom the NKVD arrested in 1936-38.[49] We conducted three tests to see how these pressures interact.

First, we look at the relationship between prewar repression and the assignment of NKVD officers to units. Regression estimates (Appendix A5) indicate that there were significantly more NKVD officers in units whose personnel were exposed to more repression. Doubling a unit's exposure to civilian repression (or purges) is associated with an 8 (or 3.6) percentage point increase in NKVD officers assigned to it. It is unsurprising that the NKVD had a larger presence in units they had recently purged. The association with civilian repression is less direct. While the NKVD could observe soldiers' age, ethnicity, lineage, and party affiliation from personnel records, they lacked the capacity to calculate repression rates in soldiers' hometowns across thousands of units, or to make assignment decisions on this basis in real time. More plausibly, the same observable socio-demographic factors that led to higher repression in soldiers' home communities may have led to greater coercion in their units.

Second, we assess whether the effect of prewar repression on behavior still holds when we adjust for fratricidal coercion as a post-treatment mediator. Sequential-g estimates[50] (Appendix A5) suggest that wartime coercion may account for some, but

September); and Colonel A.I. Korolev (12 September-8 November). A fourth, Colonel Ivan Abramov (25 August-9 September), was sentenced to eight years hard labor by a tribunal for poor performance and cowardice. See Panteleev 2006, 12 and "Abramov, Ivan Fedorovich," Pamiat' Naroda: https://pamyat-naroda.ru/heroes/pamyat-commander2215/.

47. We attribute this breakdown to a lack of monitoring and enforcement, rather than more general organizational disarray common in "greener," newly-organized units like the 90th and 168th. On average, newly-formed units had more MIA's (like the 90th), but also more KIA's (unlike the 90th), and were no more likely to award medals (Appendix A3).

48. This variable ranges from 0 to 32,692 (186 median). Data from Rozenas, Talibova, and Zhukov 2024.

49. We use Churakov 2004's database of 3288 repressed officers, and linked them to our RKKA dataset by unit. This variable ranges from 1 to 44, and is available only for units that existed in 1938 ($N = 729$).

50. Acharya, Blackwell, and Sen 2016.

not all of the observed coercive impact of prewar repression. For some outcomes (e.g. POW, punishment), the average controlled direct effect (ACDE) — the effect of prewar repression or purges on soldiers' behavior when the mediator, NKVD presence, is held constant — is larger than the effect of prewar repression on average. For others (e.g. KIA, medals), the ACDE is smaller or more uncertain. Notably, estimates for both repression and purges directionally align with RTZ's hypothesized relationships.[51]

Third, we examine how wartime NKVD presence interacted with the legacy of prewar repression on the battlefield. We extend our main model specification with an interaction term between NKVD presence and "high exposure," which we define as units with an above-median level of prewar repression or purges. Our results (Appendix A5) provide partial support for RTZ's claim that soldiers are more responsive to wartime coercive incentives if they are more familiar with authorities' ability and willingness to punish. For some outcomes, like POWs, this does appear to be the case, with prewar exposure seemingly "activating" the deterrent effect of fratricidal coercion. For most other outcomes, the prewar-wartime interaction effect is more variable. For example, higher exposure to officer purges amplifies the negative impact of NKVD presence on medals, but higher exposure to prewar civilian repression does not.[52] These findings underscore the need to consider both prewar and wartime treatment of soldiers, and how one may reinforce the other.

Cross-National Evidence

Do our findings generalize beyond the Eastern Front of WWII? And do these battlefield dynamics matter for strategic-level war outcomes?

Battle-Level Outcomes

We answer the first question by merging additional Project Mars data on blocking detachments with an existing dataset on 526 land battles involving 185 belligerents between 1939 and 2011.[53] Each observation contains information on losses, including KIA, WIA, MIA, POW, and loss-exchange ratios. With the exception of medals, these measures mirror our RKKA analyses, facilitating a direct comparison.

We regressed belligerents' casualties on blocking detachment presence, conflict fixed effects, and a battery of belligerent- and battle-level covariates (Appendix A6).[54]

51. Note that our analysis is not a replication of Rozenas, Talibova, and Zhukov 2024. We draw on common personnel data, but our data on units and purges, specification and estimation strategy are different.

52. Our results for purges are based on a more limited data sample, excluding units formed after 1938.

53. Lyall 2020b; Lehmann and Zhukov 2019.

54. Covariates include: force ratio, deployment distance, initiator dummy, recruitment type (conscript or volunteer), relative state power (from COW's Composite Index of National Capability), relative regime type (whether a belligerent was more democratic than its opponent), whether each side had signed the Geneva Convention, and an indicator for large battles with $\geq$100,000 soldiers. We also include indicators for WWII, year of battle, and seasons (winter, spring, summer).

Figure 6 reports average marginal effects estimates from these models, capturing how the presence of blocking detachments affects battlefield performance.[55] Consistent with our Soviet findings, armies with blocking detachments have fewer MIAs, but more KIAs, WIAs, and higher overall casualties as a proportion of initial troop strength.

The only result inconsistent with our Soviet findings is for POWs, which appears statistically insignificant here. This discrepancy may be due to three factors. First, these differences might simply arise from variation in how we measure fratricidal coercion. Our cross-national analyses capture the specific impact of blocking detachments, while our Soviet analyses capture the general impact of NKVD officers, who had multiple coercive tools at their disposal. Second, it may reflect reporting differences: Soviet commanders routinely recorded POWs as MIAs for political reasons (Appendix A1), a dynamic not necessarily present in other armies. Third, the meaning and valence of POW status varies across belligerents: most armies do not view falling into captivity as a disreputable act, provided soldiers fought until they exhausted other options.

Our Soviet and cross-national evidence converge on the same finding: fratricidal coercion increases an army's own casualties. What remains unclear is the effect on relative casualties. Without matching Wehrmacht divisional records, we cannot capture how the interaction of German and Soviet forces might condition the effects of blocking detachments. Coercion might, for example, increase friendly casualties but, by forcing soldiers to stand and fight, inflict even higher casualties on enemy forces.

We evaluate this possibility by running additional cross-national analyses, with loss-exchange ratios (LER) as our dependent variable.[56] A higher LER indicates greater military effectiveness, in the narrow sense of inflicting higher losses on enemy forces than the enemy inflicts on one's own. As the bottom row of Figure 6 shows, armies with blocking units have significantly *lower* loss-exchange ratios: they suffer more casualties themselves than they inflict on others. While fratricidal coercion might prevent soldiers from fleeing, it does not appear to yield broader tactical advantages. If anything, it tends to make battles deadlier for friendly soldiers than for enemy soldiers.

War-Level Outcomes

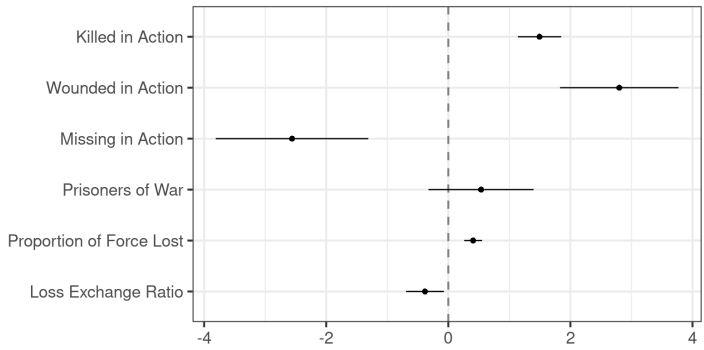
Can these battle-level dynamics help explain war outcomes? While space constraints preclude a comprehensive study of how tactical performance aggregates to victory in war, tentative evidence suggests that both (1) higher average battlefield losses, and (2) use of blocking detachments are early indicators of strategic-level defeat.

To establish the first result, we linked our cross-national battle data[57] to war outcome data from Correlates of War, with outcomes defined as "win," "lose," and

55. Our results are robust to dropping WWII and Eastern Front observations as well as the use of belligerent-level random effects (Appendix A6).

56. We define LER as irrecoverable enemy losses divided by irrecoverable friendly losses.

57. Lyall 2020b; Lehmann and Zhukov 2019.



Notes: Horizontal axis represents estimated percentage point change in outcome (as share of belligerent's battle losses) associated with the presence of blocking units. See Table A6 for estimation details.

FIGURE 6. *Impact of Fratricidal Coercion across 526 Battles, 1939-2011.*

"other."[58] We took averages of battlefield losses for each belligerent in each war, and estimated linear probability models, regressing war outcomes on logged average losses by category (KIA, WIA, MIA, POW, LER, proportion of initial force lost), fixed effects for country and decade, and a battery of covariates.[59] Our estimates suggest that belligerents are more likely to lose wars when their average battle KIA and MIA are high — absolutely, and as a proportion of initially available forces (Appendix A6).

Given that blocking detachments are associated with higher casualties *and* lower MIA rates, the net impact of fratricidal coercion on war outcomes may first appear ambiguous. A more direct look at the data paints a clearer picture. On average, 27.8 percent of belligerents who used blocking detachments since 1939 won their wars (and 42 percent lost them), compared to 37.3 (30) percent for belligerents without blocking units. We find the same pattern in linear probability models, regressing each type of war outcome on the use of blocking detachments, with the same covariates and fixed effects as before (Appendix A6). The probability of victory is 0.495 lower for belligerents who employ blocking units.

These estimates are not causal, and it is possible that losing armies sometimes use fratricidal coercion as a gamble for resurrection. Still, the historical track record of belligerents that rely on these methods is not promising, at any level of war. Even in the case of the Soviet Union, which ultimately prevailed in WWII, evidence suggests

58. Singer and Small 2010.

59. Following Lehmann and Zhukov 2019's model specification, covariates include aggregate national power (CINC), Polity2 democracy score (most recent prewar score), logged average deployment distance, and a dummy for whether the opponent signed the Geneva Conventions (Appendix A6).

that fratricidal coercion made victory costlier than it otherwise might have been.

Conclusion

Our micro-level and cross-national evidence reach the same grim conclusion: fratricidal coercion is a powerful determinant of battlefield behavior. Building on earlier analyses of prewar repression,[60] we find that the presence of NKVD Special Sections in Soviet Rifle Divisions is associated with fewer MIAs, POWs and desertions, but also higher casualties and fewer medals. Fratricidal coercion's cross-cutting effects — driving reluctant soldiers forward while dampening the initiative of true-believers — also appear in cross-national data at multiple levels of analysis. Armies that deploy blocking detachments suffer greater casualties and are more likely to lose wars. For most armies, fratricidal coercion is a gamble than does not pay off in the long run.

Our findings suggest several new avenues for the study of wartime coercion. On the theoretical front, there is pressing need to explore how identity and exposure to state discrimination and repression shape the distribution of resolve within (and across) armies. New theoretical ground could be broken, for example, by exploring how fratricidal coercion interacts with group identities to shape the credibility and effectiveness of deterrent threats, and non-punitive motivational strategies, like ideological appeals and battlefield spoils. Whether some political regimes and leaders are more likely to resort to such brutality also remains an open question.[61]. On the empirical front, our research note underscores the need for an ambitious program of data collection on various forms of fratricidal coercion, like extra-judicial executions, penal and labor battalions, and corporal punishment. We also lack fine-grained data on the relative size, recruitment, tasks, and lethality of blocking detachments.[62]

Our study also carries policy implications. Russia's war of attrition against Ukraine runs on fratricidal coercion, forcing reluctant soldiers into "meat storms" against entrenched enemy positions. Yet since prevailing frameworks for assessing military effectiveness ignore fratricidal coercion, analysts risk missing its emergence and dismissing its importance. As we have seen, these measures can boost an army's resilience by preventing disintegration, an unwelcome surprise for those who see coercion as a sign of pending collapse. However, the vulnerabilities introduced by fratricidal coercion are real. Militaries and intelligence agencies primed to look for these cross-cutting effects can exploit them. Commanders might, for example, target their adversary's coercive apparatus to create new avenues for disillusioned soldiers to flee, or use information operations to stoke resentment. They might also stand aside, content to watch the enemy kill its own soldiers to hold itself together. Far from a relic of a bygone era, fratricidal coercion remains a persistent feature of modern war,

60. Lyall 2020a; Rozenas, Talibova, and Zhukov 2024.
61. Weeks 2014; Saunders 2011.
62. For a similar effort to map security agencies during peacetime, see De Bruin 2020.

one that scholars and policymakers would do well to integrate into theories of war and military effectiveness.

Data Availability Statement

Replication materials are available on Harvard's Dataverse: dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/914AN0

Supplementary Material

(This is dummy text) Supplementary material for this research note is available at <https://doi.org/10.1017/Sxxxxxxxxx>.

References

Acharya, Avidit, Matthew Blackwell, and Maya Sen. 2016. Explaining Causal Findings Without Bias: Detecting and Assessing Direct Effects. *American Political Science Review* 110 (3): 512–529.

Ager, Philipp, Leonardo Bursztyn, and Hans-Joachim Voth. 2022. Killer Incentives: Status Competition and Pilot Performance During World War II. *Review of Economic Studies* 89 (5): 2257–2292.

Ardant du Picq, Charles. 1904. *Études sur le combat: combat antique et combat moderne.* R. Chapelot.

Askey, Nigel. 2016. *Operation Barbarossa: The Complete Organizational and Statistical Analysis, and Military Simulation.* Vol. IIIA. The Soviet Armed Forces, Mobilization, and War Economy from June to December 1941. Lulu Publishing.

Berkovich, Ilya. 2017. *Motivation in War: The Experience of Common Soldiers in Old-Regime Europe.* Cambridge University Press.

Best, Geoffrey. 1988. *War and Society in Revolutionary Europe, 1770-1870.* McGill-Queen's University Press.

Chen, Daniel. 2017. "The Deterrent Effect of the Death Penalty? Evidence from British Commutations During World War I". Unpublished Manuscript, February.

Churakov, Dmitriy. 2004. Repressirovannyye voennosluzhashchiye Krasnoy Armii. http://www.rkka.ru/handbook/personal/repress/main.htm.

Costa, Dora, and Matthew Kahn. 2003. Cowards and Heroes: Group Loyalty in the American Civil War. *Quarterly Journal of Economics* 118 (2): 519–48.

Daines, Vladimir. 2008. *Shtrafbaty i zagradotryady Krasnoi Armii.* Yauza.

De Bruin, Erica. 2020. Mapping Coercive Institutions: A New Data Set of State Security Forces, 1960-2010. *Journal of Peace Research* 58 (2): 315–325.

Duffy, Christopher. 1987. *The Military Experience in the Age of Reason.* Routledge.

Fes'kov, V.I., K.A. Kalashnikov, and I.F. Golikov. 2003. *Krasnaya Armiya v pobedakh i porazheniyakh 1941-1945 gg.* Tomsk University Press.

Fitzpatrick, Sheila. 2000. *Everyday Stalinism: Ordinary Life in Extraordinary Times: Soviet Russia in the 1930s.* Oxford University Press.

Hamner, Christopher. 2011. *Enduring Battle: American Soldiers in Three Wars, 1776-1945.* Kansas University Press.
Henn, Soeren, and Connor Huff. 2021. "The Legacies of Atrocities and Who Fights". Unpublished Manuscript, December.
Howard, Michael. 2009. *War in European History.* Revised Edition. Oxford University Press.
Huff, Connor, and Robert Schub. 2021. Segregation, Integration, and Death: Evidence from the Korean War. *International Organization* 75, no. 3 (Summer): 858–79.
Keegan, John. 1976. *The Face of Battle.* Viking.
Lehmann, Todd, and Yuri Zhukov. 2019. Until the Bitter End? The Diffusion of Surrender Across Battles. *International Organization* 73 (1): 133–169.
Lyall, Jason. 2017. Forced to Fight: Coercion, Blocking Detachments, and Trade-offs in Military Effectiveness. In *The Sword's Other Edge: Trade-offs in the Pursuit of Military Effectiveness,* edited by Dan Reiter, 88–125. Cambridge: Cambridge University Press.
Lyall, Jason. 2020a. *Divided Armies: Inequality and Battlefield Performance in Modern War.* Princeton University Press.
Lyall, Jason. 2020b. *Project Mars: Version 1.0.* Https://doi.org/10.7910/DVN/DUO7IE.
McLauchlin, Theodore. 2020. *Desertion: Trust and Mistrust in Civil Wars.* Cornell University Press.
Memorial. 2017. Kadrovyy sostav organov gosudarstvennoy bezopasnosti SSSR. 1935-1939. https://nkvd.memo.ru/.
Merridale, Catherine. 2005. *Ivan's War: Life and Death in the Red Army, 1939-1945.* Picador.
Panteleev, N.A. 2006. *Devianostaya, Ropshinskaya.* Vesti.
Petrikeev, D.I. 1994. *Nash Ratnyi Trud: Vspominaiut veterany 168-i Rizhskoi strelkovoi divizii.* Tertsiya.
Rozenas, Arturas, Roya Talibova, and Yuri Zhukov. 2024. Fighting for Tyranny: State Repression and Combat Motivation. *American Economic Journal: Applied Economics* 16 (3): 44–75.
Rozenas, Arturas, and Yuri Zhukov. 2019. Mass Repression and Political Loyalty: Evidence from Stalin's 'Terror by Hunger'. *American Political Science Review* 113 (2): 569–583.
Saunders, Elizabeth. 2011. *Leaders at War: How Presidents Shape Military Interventions.* Cornell University Press.
Singer, J. David, and Melvin Small. 2010. *Correlates of War. Inter-State War Data: Version 4.0.* Available at <http://www.correlatesofwar.org/>.
Statiev, Alex. 2012. "La Garde meurt mais ne se rend pas!" Once Again on the 28 Panfilov Heroes. *Kritika: Explorations in Russian and Eurasian History* 13 (4): 769–798.
Sycheva, K.V., and M.M. Malakhova. 1954. *Boevye deistviya strelkovoi divizii: Sbornik takticheskikh primerov iz Velikoi Otchestvennoi voiny.* Voenizdat.
Talmadge, Caitlin. 2015. *The Dictator's Army: Battlefield Effectiveness in Authoritarian Regimes.* Cornell University Press.
Weeks, Jessica. 2014. *Dictators in War and Peace.* Cornell University Press.

Authors

Jason Lyall is James Wright Chair of Transnational Studies and Associate Professor of Government at Dartmouth College. He can be reached at jason.lyall@dartmouth.edu.

Yuri Zhukov is Associate Professor at the School of Foreign Service and Department of Government at Georgetown University. He can be reached at ymz2@georgetown.edu.

Acknowledgements

For helpful comments, we thank Jacob Aronson, Avishay Ben Sasson-Gordis, Andrew Bertoli, Stephen Brooks, Stephen Chaudoin, Christian Davenport, Christina Davis, Mark Dincecco, Chris Fariss, Peter Feaver, Margaret Foster, Taylor Fravel, Jeffrey Friedman, Ryan Grauer, Mariya Grinberg, Andy Halterman, Dotan Haim, Paul Huth, Iain Johnston, Jennifer Lind, Christoph Mikulaschek, Nicholas Miller, James Morrow, Emily Myers, Emerson Niou, Roger Petersen, Barry Posen, Katy Powers, Michael Poznansky, Daryl Press, Mara Revkin, Livia Schubiger, David Siegel, Megan Stewart, Roya Talibova, Ben Valentino and William Wohlforth. We also thank the *IO* editors and anonymous reviewers for helpful feedback. We also thank audiences where we presented earlier versions at the University of Michigan, Dartmouth College, Duke University, Duke University School of Law, Harvard University, MIT, and the 2020 American Political Science Association annual meeting. We thank Kelly Sandefer at Beehive Mapping for our excellent maps.

Key Words

Fratricidal coercion; combat motivation; repression; military effectiveness.

Dummy dates; please ignore.

Date received: MMMM DD, YYYY; Date accepted: MMMM DD, YYYY.