

Why Armies Break: Explaining Mass Desertion in Conventional War*

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Why do soldiers desert? To date, our theories of military effectiveness have largely sidestepped the question of why soldiers abandon the fight and return home. Yet the problem is widespread. About half of all belligerents fighting conventional wars since 1800 have experienced mass desertion, when $\geq 10\%$ of their fielded forces abandon the fight and return home. Drawing on a new dataset of 825 combatants in 250 conventional wars (1800-2011), I argue that wartime mass desertion is associated with rising levels of prewar military inequality. Regimes that legitimate their rule with inclusionary collective identities where all citizens are equally eligible to serve have far lower instances of mass desertion than regimes that use ethnicity as a benchmark to define the terms of military service. In particular, regimes that recast national security as a private good and use their militaries to repress targeted ethnic groups in the prewar era have the greatest risk of wartime desertion. My empirical strategy combines crossnational regression, a two-control group comparison via matching, and process-tracing through two matched combatants to test these claims against alternative explanations.

Key Words: military effectiveness; identity; military inequality; desertion; conventional war; civil war; matching

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What explains mass desertion from armies fighting conventional wars? While the image of war-weary deserters skulking home is an evocative one, our theories of military effectiveness have largely sidestepped the question of why soldiers abandon the fight. What literature exists has been dominated by historians, who typically cast desertion as a product of contingent battlefield conditions, notably high casualty rates, low morale, and a sense of futility in the face of looming defeat. These studies, while rich in their insights, have been confined to a few prominent historical cases—or even individual armies and units—and have avoided generalization in favor of context-specific factors. For their part, political scientists have typically concentrated on loss-exchange ratios between armies as the key indicator of military effectiveness, thus neglecting alternative measures that focus on cohesion, not killing efficiency. We are therefore left without even basic descriptive data on the incidence of mass desertion over time, despite its outbreak in important cases such as the American Civil War, Russian, Habsburg and Ottoman armies in World War One, or more recently, in the Iraqi, Syrian, Libyan, and Islamic State armies.

Explaining mass desertion is important for several reasons. Desertion can shape battlefield outcomes, both by leaving armies understaffed at critical junctures and by forcing military authorities to adopt tactics and operations designed to reduce the opportunity for (further) desertion. In extreme cases, entire armies can unravel from mass desertion, leaving a state unable to prosecute the war or even guarantee its survival. Mass desertion can also redistribute violence spatially across (and behind) battlefield lines; deserters often regroup in rear areas as brigands, preying upon local populations and isolated garrisons, disrupting logistics and livelihoods alike. The frequency of mass desertion also challenges existing theories that tend to assume cohesion as a given and that socialization into military discipline is uniform and effective. Soldiers clearly have agency to resist socialization pressures; in fact, small group bonds, often cited as the basis for military cohesion, can subvert that same cohesion if used to organize collective desertion.

I stake three claims here. First, I argue that wartime mass desertion is shaped by the prewar nature of the collective identity that regimes use to legitimate their rule. These identity projects define the boundaries of the political community and, crucially, establish the relationship of groups and individuals to military service. In some settings, regimes

base their rule along inclusionary lines that do not draw distinctions within the population in terms of their military service (a “Type0” identity project, national security is a public good). Other regimes legitimate themselves using a narrower sense of political community, one that marks out certain ethnic groups for marginalization within the military (“Type1” identities). Some populations may be deemed potentially disloyal, for example, and thus their members are subjected to state-imposed restrictions, including barred entry to higher officer levels and shunting into less glamorous support roles. Still other regimes define targeted ethnic groups as outside the political community (“non-core”) and repress them in the hopes of forcing a congruence between their communal vision and the underlying population (“Type2” identity). As access to the military becomes more restrictive, and as the protection from state coercion recedes, military inequality is said to increase. The greater the marginalization of targeted ethnic groups, and especially the greater the violence they are subjected to, the greater the likelihood of observing mass desertion on the battlefield.

Second, I make the case for expanding existing definitions of military effectiveness to include battlefield cohesion. A small but important literature has argued for studying cohesion, especially small group bonds within units, as a key ingredient to battlefield resiliency and “staying power” (Castillo, 2014; Henderson, 1985; Moskos, 1975; Shils and Janowitz, 1948). Yet despite mass desertion’s potential importance for explaining battlefield and war outcomes, the issue has received scant attention in our leading works on military effectiveness (Talmadge, 2015; Reiter, 2009; Desch, 2008; Brooks and Stanley, 2007; Biddle, 2004; Reiter and Stam, 2002; Stam, 1996; ?; von Creveld, 1982; Dupuy, 1979). Rather than assume cohesion is a fixed property of armies and units, we should broaden our conceptual and theoretical horizons to include measures of cohesion like mass desertion (and defection) since many, perhaps most, armies struggle to hold their forces together even before combat is joined. Both the threat of desertion and the measures adopted to limit its outbreak can have significant consequences for battlefield performance that are not captured in existing theories of military effectiveness.

Third, I move beyond the standard Correlates of War (COW) Inter-State War dataset (Correlates of War, 2010) and construct a new dataset of conventional wars and combatants for the 1800-2011 era. This new dataset, known as Project Mars, records the incidence, timing, and severity of desertion from 825 combatants in 250 conventional wars; 96 coders working in 21 research languages took nearly six years to complete these coding tasks. The new dataset introduces 124 new non-COW combatants; greatly expands the number of

relevant wars from the 98 included in the most recent Inter-State War dataset (Version 4.0); and collapses the artificial distinction between interstate and internal wars by including all wars fought conventionally.¹

These data suggest that desertion was, and remains, a scourge of conventional armies, with about half (55%) of all combatants experiencing mass desertion at least once. Similarly, some 288 episodes of mass desertion are recorded across the 825 wartime observations. To test the proposed identity type explanation, I build a mixed method approach with three stages: crossnational analysis within different historical eras; a two-control group comparison implemented via matching; and the use of matching to select two similar combatants for close-range process-tracing of the proposed causal pathway from identity type to battlefield desertion. The two cases chosen—the Sultanate of Morocco during the Hispano-Moroccan War (1859-60) and the Khoqand Khanate fighting the Khoqand-Russian War (1864-65)—are matched on 29 covariates but display sharply different patterns of mass desertion, an outcome attributable to their differing identity types. Taken together, evidence strongly supports the proposed association between identity type and mass desertion. Alternative explanations, including regime type, material preponderance, and different modes of military organization, find mixed or little empirical support.

1 Measuring Mass Desertion

Two obstacles have blocked progress in devising and testing theories of desertion. First, while existing studies offer rich insights, the absence of a crossnational dataset of desertion has frustrated efforts at constructing generalizable theories. To date, the study of desertion has been dominated by a handful of national experiences — notably French (Forrest, 1989), British (Keegan, 1976), and American armies (Hamner, 2011) — and prominent cases, principally the American Civil War (Costa and Kahn, 2008; Weitz, 2005; McPherson, 1997) and First and Second World Wars (Shils and Janowitz, 1948; Stouffer et al., 1949; Watson, 2008; Fennell, 2011). In some cases, these studies have been as fine-grained as individual armies, such as the Armée du Nord during the 1791-94 Revolutionary War in France (Lynn, 1984) or the Eighth Army during the 1941-43 North African campaign (Fennell, 2011). Even specific units, such as the 2nd Scottish Rifles at the 1915 Battle

¹These data are a subset of a much larger project that steps outside the COW framework to investigate the sources of battlefield performance in conventional war. See (Lyll, 2015*a*).

of Neuve-Chapelle, have been studied (Baynes, 1969). How and whether these findings cumulate remains an open question.

Second, conceptual confusion exists across (and sometimes within) these studies over what distinguishes desertion from related behavior. Conscription riots, for example, along with preemptive surrender, side-switching (“defection”), disorganized retreats, draft dodging, and general malingering and discontent among soldiers have all been cast as “desertion” in existing work.² These behaviors do share some affinity with desertion and each other—all suggest a common taproot in poor morale, for example—but are likely to be driven by different causes and causal processes.

To reduce this unwelcome conceptual confusion, I define *mass desertion* as the unauthorized wartime withdrawal of a unit (or group of soldiers) from the battlefield or its rear areas with the intention of permanently abandoning the fight. Withdrawing from the war effort can take two forms: hiding from state authorities among the civilian population in an attempt to return to a prewar life; or resorting to brigandage in rear areas without coordinating with enemy forces. Seasonal desertion, where soldiers temporarily return home to plant or harvest crops with tacit approval of authorities, is excluded. So too are trench mutinies, as with the French Army after the disastrous Second Battle of Aisne (1917), since these soldiers rebelled in place but did not abandon their posts (Pedroncini, 1983).

More concretely, mass desertion is coded as occurring when $\geq 10\%$ of an army’s total deployed forces has decamped for home. This threshold is a pragmatic compromise designed to separate small-scale individual desertions that afflict nearly every army from large-scale desertion that can cripple battlefield effectiveness. As part of the broader project, data were also collected on the timing of desertion, its overall severity (as % of total forces fielded), and the identities of deserting units/soldiers.

Coding teams collected evidence across primary and secondary materials. The digitization of millions of books by GoogleBooks facilitated our data collection; thousands of volumes written by participants cast previously obscure wars and battlefield practices into sharper relief. Of course, data quality is uneven across cases. Our material range from extremely detailed records from a dedicated Bolshevik bureau tracking Red Army desertions (over 2 million) during the Russian Civil War (Olikov, 1926) to clipped passages referring to “widespread” or “endemic” desertion within a particular army (see, for example, Mody

²Studies of defection during civil wars include McLauchlin (2015); Christia (2012); McLauchlin (2010); Kalyvas (2008).

1988, 51-52). Coders used a four-point scale to measure their confidence in estimates of the incidence and size of desertion. Estimates are themselves political creatures; combatants have incentives to over- and underestimate deserters for reasons of strategy and national pride. We sought to reduce this measurement error by triangulating across the combatant's own numbers and those of its enemy to construct ranges of estimated desertion.³

1.1 Introducing Project Mars: A New Dataset of Conventional Wars and Combatants

The quantitative study of military effectiveness in modern war has been defined by the Correlates of War Inter-State dataset (now Version 4.0). Indeed, our notions of wars and combatants, as well as their properties, largely flow from decisions made in the 1960s, when the Correlates of War project was first launched. The absence of data on mass desertion in the COW Inter-State dataset creates an opportunity, however, to construct a new dataset of conventional wars and combatants. In brief, Project Mars was constructed around two precepts: (1) all combatants that could muster conventional armies should be included, regardless of their diplomatic status; and (2) our empirical domain needs to be expanded to include civil wars fought conventionally.

The Correlates of War, for example, excludes states from the Inter-State War dataset if they lacked diplomatic recognition at the charge d'affaires level (or above) with Great Britain and France (Singer and Small, 1966). This decision rule excludes a large number of combatants who could (and did) fight conventionally but lacked diplomatic recognition by London and Paris. In many cases, these combatants were recognized by other Powers; imagine the counterfactual universe if state membership was apportioned by recognition from St. Petersburg or the Ottoman Porte. I therefore define the sample of combatants by their method of warfare, firmer ground than the (political) act of diplomatic recognition.⁴

Moreover, the Inter-State War dataset by definition excludes many civil wars—including the Taiping Rebellion, American Civil War, Russian Civil War, China's Warlord Era (1920s), and Spanish Civil War—that were fought conventionally. These wars are substantively important and represent a significant omission if excluded from our dataset. The new dataset therefore pools together similar types of warfare without regard for com-

³Low and high estimates of % desertion are also useful for testing sensitivity to the 10% threshold for inclusion as mass desertion. Additional instructions are found in the codebook.

⁴On the drawbacks of COW and efforts to revise it, see Fazal (2007); Wimmer (2013).

batants' prior diplomatic status or the eventual outcome of the war.

Conventional war is defined here as an armed engagement between two or more states that results ≥ 500 battle deaths.⁵ These wars have five properties: (1) combatant armies display evidence of military specialization, possessing infantry, calvary, and artillery (or contemporary equivalents); (2) the purpose of combat is to destroy the enemy's military power through direct battle between opposing forces; (3) the battlefield front and rear areas are reasonably well-defined; (4) soldiers typically wear uniforms and do not conceal themselves among civilians; and (5) infantry and calvary possess firearms.⁶

Combatants are defined by four traits: (1) a political capital; (2) the ability to control (and tax) a population; (3) possession of a standing conventional military, or the ability to muster such a force immediately after hostilities are declared; and (4) the state suffers at least 1% of a war's (or campaign's) overall casualties. This last requirement excludes states that played only minor roles or did not engage in fighting. The new dataset includes 825 combatant observations from 228 distinct combatants; 124 of these combatants are not included in the Inter-State War dataset. A total of 250 wars are recorded for the 1800-2011 era; this compares favorably with the Inter-State War dataset, which contains 98 combatants in 98 wars (1815-2003) for 337 total observations.⁷

The addition of new wars and combatants sharply improves coverage of China, Central Asia, South America, and sub-Saharan Africa. For example, the Inter-State War dataset records 12 wars in China; our coding efforts add another 27, including some of the largest conventional wars ever fought (the Warlord Era, 1920-30), not to mention some of the bloodiest wars of the nineteenth century (the Taiping and Nien Rebellions). Similarly, the Inter-State War dataset contains just six wars in Central Asia. We include an additional 25 wars, especially during 1826-1946. We also record a two-fold increase in South American Wars; while COW records nine wars, we add 17 more, including wars of independence excluded due to COW's 1816 start date.

The largest coverage gains are in sub-Saharan Africa. Excluding Ethiopia, there are only three wars (Angola, Uganda-Tanzania, and the War of the Aozou Strip) in COW's

⁵Note that this threshold differs from COW's standard 1,000 battle death criterion.

⁶The ability to supply *all* soldiers with firearms is not, however, a prerequisite for inclusion. Some armies, notably in nineteenth century African wars, had specialized firearm-equipped units that used battlefield successes to outfit additional soldiers with captured weapons.

⁷Following standard practice (Reiter and Stam, 2002), multi-front wars such as the Napoleonic Wars or World Wars I and II are also divided into separate campaigns. In total, the dataset records 322 campaigns; these are detailed in the Supplemental Appendix.

Inter-State War dataset. Even Africa’s “Second World War” in the Democratic Republic of Congo is excluded due to its classification as an intra-state war. By contrast, our dataset records 33 additional sub-Saharan Wars. All wars and non-COW combatants are listed in the Supplemental Appendix.

1.2 Patterns of Desertion

Project Mars data reveal that mass desertion is a frequent occurrence in conventional wars. There are 288 instances of mass desertion, or roughly one-third of every combatant observation for 1800-2011. Over that time period, 126 out of 228 combatants in the dataset (55%) experienced mass desertion at least once.

In the pre-modern era (1800-1917), mass desertion occurred in 39% of all combatant observations (187/482). Similarly, nearly 62% of all combatants in this time period (85/138 combatants) experienced mass desertion at least once. In the post-1917 era, the incidence of mass desertion does somewhat decrease, occurring in 29% of all possible cases (101/343). About 46% of all combatants in this era (58/126) had at least one incidence of mass desertion.⁸ The incidence of mass desertion is unchanged after 1945; 29% of all combatant observations witnessed desertion (47/161), while nearly 45% of combatants observed mass desertion at least once (33/73). Far from a rare event, mass desertion was a major challenge to conventional armies and remains one in the contemporary era.

2 Argument: How Prewar Identity Type Shapes Wartime Desertion

To understand mass desertion, we must root our investigation in the political processes unleashed by rulers as they seek to legitimate their domestic rule. In this view, battlefield performance is an outgrowth of the dynamics of prewar state- and nation-making, especially the warp-and-woof of constructing, consolidating, and defending bases of national identification in the face of opposition, latent or otherwise, from non-favored groups. This may seem an unlikely starting point; most accounts of battlefield performance and military effectiveness start their narratives on the eve of battle, with attention paid to the dynamics of war-fighting, including force ratios, technological imbalances, and questions of doctrine

⁸This difference between eras is statistically significant at $t(3.01)$, 763.66df, $p=.002$.

and strategy. These are important aspects, to be sure, but truncating our gaze to wartime only omits the structural processes and forces at work on how states craft their military machines and, in particular, how these machines reflect their societies. Here, armies are products of their societies, all of which reflect particular paths to constructing national identifications that amplify, or undercut, a state's war-making.

The argument begins from a simple premise: all regimes must legitimate themselves in the eyes of their populations by constructing collective identities — “identity projects” — that define the boundaries of their political communities. I define an *identity project* as a systematic, regime-orchestrated, vision of the political community designed to legitimate domestic rule through rhetorical and other strategies. Identity projects have three purposes: (1) to define membership criteria for inclusion in the core referent group (the “community”) and, by definition, the grounds for excluding “non-core” groups from full membership; (2) to articulate the referent group's broader political aims, creating criteria for judging the regime's effectiveness; and (3) to establish the level of access to, and protection from, the state's coercive apparatus for members of different social categories. The term has some conceptual overlap with ideology; I prefer “identity project,” however, since it emphasizes the definition of the referent group rather than the broader economic and social program suggested by the term ideology (Sanin and Wood, 2014, 215).

Explicit in the construction of core and non-core groups is their respective access to, and protection from, the state's military. Scholars have increasingly turned their attention to sources of inequality, whether political or economic, within states. Military inequality, by contrast, is typically overlooked, even though military service is a defining feature of the relationship between the state and its citizens or subjects (Levi, 1997). *Military inequality* is defined here as the imbalance that exists between favored (core) and non-favored (non-core) groups within society along two axes: (1) the degree to which individuals and their ethnic groups have unfettered access to the military, including serving at senior levels across all combat branches; and (2) protection from the military, in terms of safeguarding the physical security of the individual and relevant societal groups.

While nearly all our theories of international relations treat national security as a public good, enjoyed by all, for most of history national security was restricted to certain (core) groups while restricted or denied to other groups within society, depending on their status within the regime's communal vision. Sometimes states accommodated or even celebrated differences within their militaries. But most states have systematically varied in their

willingness to allow all its members access to military service. In many nation-building projects, certain groups have been discriminated against in their service, facing group-based restrictions that transform the “public” good of national security into something closer to a “club” good. In other cases, communal identification is built atop a coercive foundation in which certain groups are targeted for state-directed repression, changing national security to a private good that they are systematically denied even as their members are forcibly impressed into military service.

While there are several possible cleavages for defining core versus non-core groups, I focus here on ethnic identifications that represent alternative bases for identification. Ethnicity offers powerful and immediate advantages when constructing a communal vision and consolidating the state. Ascriptive traits allow for the easy identification of favored and non-favored members. Ethnicity is especially useful in weakly centralized environments where actors require simple heuristic devices for identifying supporters and for reach broad agreement on important objectives such as the distribution of collective goods by the state, its political boundaries, and treatment of non-coethnics. Shared coethnicity also helps coethnics police their own ranks by making it harder for fellow members to defect; dense ties that bind ethnic groups together facilitate information-sharing as well as the identification, and punishment, of would-be defectors to the ethnic group (Fearon and Laitin, 1996).

In this formulation, “non-core” may refer to one or more ethnic groups, each with their own varying degree of status and acceptance within the regime’s identity project. Non-core is not synonymous with minority status, however. In many cases, non-core groups may represent a large share of the population; indeed, their members may even outnumber the core group. Societal divisions revolve around group status; subordination is function of status, not group size. Ethnic diversity is also not necessarily problematic (Alesina and LaFerrara, 2005; Miguel and Gugerty, 2005; Alesina, Baqir and Easterly, 1999). Cleavages between the collective identity project and subordinate identities only become salient if they are activated by regime actions designed to marginalize, exclude, or repress along a contested ethnic axis. Other cleavages may remain dormant or shape only personal, not political, relations (Posner, 2005, 2004).

2.1 The distribution of military inequality

How these manage the dilemma of difference within their societies will dictate subsequent risk of mass desertion. Moving from a world in which all combatants possess uniform levels of military equality — our default position — to one in which combatants vary significantly internally across this dimension creates the possibility of constructing a typology of identities to categorize combatants across historical eras. At one end of the spectrum, certain identity projects envisage equal opportunity for all members of the population to perform military service; all members are equally shielded from the state’s coercive violence, and the use of the military against citizens is deemed largely unthinkable (a “Type0” identity project for short). Other identities strike a different balance, targeting certain ethnic groups as second-class citizens who possess less-than-full access to the state’s military machine (a “Type1”). Members of these groups may be viewed with suspicion and face obstacles, bureaucratic or otherwise, that truncate the range of their military participation. Finally, some regimes invoke communal identities that deliberately define certain populations as outsiders, creating a situation of alien rule (Hechter, 2013) where these groups are subjected to state-directed violence or its continual threat (“Type2”). Military inequality is extreme in these settings; protection from the state’s violence, a basic pillar of the social contract, is revoked and, as a consequence, the regime’s legitimacy is highly variable across the population.

Type0 identity projects avoid regime-directed military discrimination of any group within the state’s political boundaries. These identities often draw on civic conceptions of the political community that are largely stripped of specific group characteristics in favor of a broader group identification that is accessible to all members of the community. Economic and political discrimination may still exist in these societies; what matters here is that state-imposed, group-based restrictions on military recruitment and service are absent. Flowing from an inclusionary vision of the political community, national security is defined as a public good: it is non-excludable and non-rivalrous. All citizens are either defined as “core” or, if non-core members (i.e. ethnically or racially different), they are nonetheless viewed as citizens.⁹ Group identities may still be present, but are subordinate to a collective vision that enjoys higher overall status. The state at least has nominal access to nationalism and patriotism, or to a higher order category that has value and

⁹Consensual exclusion is permitted here, like Orthodox Jews in Israel.

prestige among the population. Legitimacy still needs to be maintained, but regime has a cushion of allegiance. Military service not foreclosed; certain subnational identities (i.e. Gurkhas) may even be especially venerated as “martial races,” though not to the exclusion of other citizens. In short, differences are accommodated, even venerated in some cases, rather than exploited for political gain by the regime.

Contemporary Western democracies such as Canada and the United States possess Type0 identities. Access to the superordinate identity is not formally blocked, and military service remains open to all community members. Democracies are not alone, however, in their use of civic nationalism or patriotism. Some authoritarian powers have relied on identity projects that are designed to foster allegiance from all ethnic groups even as their political rights are universally suppressed. In these cases, conscription falls heavily on the whole population rather than a narrow favored subset. China, for example, passed a Military Service Law in 1984 outlining military service as a duty for all citizens regardless of race and religious creed; Article 55 of its constitution also defines military service as a “sacred duty” and “honored obligation” for all citizens to uphold. These Type0 combatants therefore approximate the implicit ideal in our theories of states that seek to maximize all of their latent power and that do not impose arbitrary categories of military service on their male population.

Type1 identity projects are characterized by the belief that one or more groups have lower status than core members. These marginalized groups are viewed with suspicion by the regime and face obstacles to military service. They may be underrepresented by design in their proportion of military service; they may experience a “glass ceiling” beyond which they cannot be promoted; their battlefield participation may be limited to certain roles and functions, and they are often consigned to rear areas. Though they possess formal citizenship, non-core group individuals are second-class citizens in terms of military service. Though military inequality is higher in this condition, non-core members still enjoy security from state-orchestrated violence; marginalization, not repression, is the hallmark of Type1 projects. National security is thus characterized as a club good in Type1 combatants; it is excludable, at least partially, based on tiered membership status, but is non-rivalrous: all members, core or not, are considered worth protecting. The military in turn reflects this tiered membership approach as artificial, group-based restrictions are imposed on targeted categories within the broader population. The notion, then, of security as a “public” good, and of “national” security, begins to break down in these combatants. Subordinate

identities are often as strong as attachments to the collective, regime-articulated visions, and often in contestation, as the core group pushes toward greater homogenization of identities while non-core groups resist such pressure.

National leaders in post-partition Pakistan, for example, constructed a Type1 communal vision for their bi-furcated state. They emphasized that Pakistan was to be an Urdu-speaking home for Muslims at time when few but the elites spoke Urdu and the population ethnically mixed. Regional identities were ignored or defined out of existence (Brass, 2003; Talbot, 1998; Jalal, 1995, 1990). Early leaders such as M.A. Jinnah and Ali Khan claimed for Pakistan the “lost” territories of Kashmir and Jammu and viewed “Hindu India” as intent on straggling the new state in its infancy, whether via overt military action or subversion by India-orchestrated communal disturbances.¹⁰

The nascent Pakistani military reflected this communal vision. Bengalis were largely barred from senior positions in the military hierarchy, and were vastly underrepresented in the military as whole, because West Pakistani elites felt Bengalis were “effeminate” and ineffective soldiers because of their presumed closeness to Hindu peoples. By 1959, for example, Bengalis only occupied two percent of the military’s command positions (Rahman, 1996, 121) but represented an estimated 56% of the population in the 1951 census. Those few Bengali units that did exist were segregated from the rest of the army and received minimal training (Cohen, 1998, 42fn11-44, fn13). Bengali-dominated East Pakistan was therefore left only partly defended, a military strategy that spelled disaster in the 1971 war with India and that led to the creation of an independent Bangladesh.¹¹

Type2 identity projects are national visions in which one or more groups are outside the community and can (and should) be repressed by the state. These identity projects involve the deliberate use of state repression to control, if not destroy, targeted populations. Violence here is regime-directed and widespread. Genocide and mass killings, regime-orchestrated pogroms or deliberate starvation, forced population displacement, slavery, and the presence of a civil war against central authorities (or local representatives) are all evidence of a Type2 identity project. Type2 identity projects withhold the protection of

¹⁰Such views were articulated before the 1947 partition and then quickly enacted. Compare, for example, the consistency of M.A. Jinnah’s Presidential Address at the 27th Session of the AIML (22-24 March 1940) in (Pirzada, 1970, 338) with the language of his “National Consolidation” speech (24 March 1948) in (Burke, 2000, 200).

¹¹Pakistan’s war effort in 1971 was hamstrung by the absence of Bengali-speakers in the military and the fact that Bengali soldiers took the opportunity to desert, crippling logistical systems, especially in the Air Force, where they had been shunted (War Inquiry Commission, 2000, 89,118,124).

the state from certain groups and unleash mass categorical violence (Strauss, 2015) against ethnic groups with the intent of nation-building through the suppression or destruction of rival identity claims. The rhetoric of these nation-building projects is far from subtle, with “alien” elements, “parasites,” “traitors,” “fifth columnists,” and “national pariahs” (as Jews were identified by the Red Army in the 1920s, Sanborn 2003) are examples of de-humanizing language that serve to set apart certain ethnic groups.

Type2 combatants are marked by the presence of strong subordinate identities and weak allegiance to a national vision among these ethnic groups, setting up the possibility of open conflict between groups within society. In such settings, the benefits of communal membership, as well as the risk of exposure to violence, are wildly uneven, undercutting the notion of national security as a collective good. Instead, national security is both excludable and rivalrous, and so is best characterized as a private good. The Leviathan, in other words, has revoked the social contract of providing protection in exchange for obedience, if not loyalty, to the broader political community. Security, too, has become rivalrous, as core groups not only enjoy preferential access to senior military positions but employ the state to wage war against non-core populations, including possible genocide, in a form of internal colonialism (?). From the non-core groups’ vantage point, far down the status hierarchy, the regime is likely viewed as illegitimate and the state’s territorial boundaries artificial rather than taken for granted, especially if these groups have a long history of indirect rule (Hechter, 2000; Wimmer, 2013, 152).

The construction and forced imposition of a Soviet identity in the aftermath of the Russian Civil War offers one example of a Type2 project. Designed to transcend “narrow” preexisting nationalisms, and faced with a multiethnic population, Soviet leaders sought to redefine the political community around Communist principles that would bind allegiance to the new regime (Harris, 2013; Brandenburger, 2011, 2002; Martin, 2001). Such efforts were inherently violent, however. Between 1925 and 1939, Lenin and then Stalin brought the full weight of the Soviet state to bear on targeted ethnic groups. These campaigns include: a counterinsurgency campaign against Chechens and Ingush in the Northern Caucasus (Gapurov, Izrailov and Tovsultanov, 2007); the systematic targeting and destruction of the *kulak* class, an ideological category systematically dominated by non-Russians; a near-genocidal campaign of famine against Ukrainians (Snyder, 2010; Danilov, Manning and Viola, 2006; Conquest, 1986); the forced movement of minority populations, including Germans, Koreans, Poles, and Jews away from borderlands (Naimark, 2010); and a long-

running campaign against Turkish *Basmachi* in Soviet Turkestan (Gusterin, 2014; Broxup, 1983; Olcott, 1981). While state violence may take singular or many forms, the thread that unites Type2 identity projects is the forced imposition of a new community ideal atop preexisting ethnic affinities that amplifies societal divisions while generating high levels of military inequality.

2.2 How prewar military inequality conditions wartime desertion

Identity type and its corresponding level of military inequality condition mass desertion through several mechanisms.

Most obviously, Type1 and especially Type2 identities generate grievances among soldiers from targeted groups. Anger at the regime in turn creates motive for indiscipline and a reluctance to sacrifice for the regime. We should observe evidence of poor morale among non-core soldiers that reflects specific grievances against the national community and the treatment of the group itself. Soldiers from marginalized or repressed ethnic groups are more likely to seek opportunities to escape from the battlefield rather than die on behalf of an illegitimate regime.

These soldiers are also likely to organize desertion collectively. Strong group solidarity among non-core soldiers sows the seeds for future wartime discipline problems as coethnicity facilitates collective action against military authorities. Coethnics share dense networks that create shared expectations about other coethnics' beliefs (including the utility of continuing to fight) and that disseminate information quickly among group members. These ties are durable and difficult for military authorities to disrupt. Moreover, coethnics possess superior in-group policing capabilities, helping to shield information about potential desertion attempts from prying authorities while also safeguarding ties to other group members who have successfully deserted and who can offer support and sanctuary.

Scholars, however, have argued that soldiers are often driven by ideology, especially nationalism, and thus fight to defend a particular cause (Lynn, 1984; Posen, 1993; McPherson, 1994; Levi, 1997; Reiter, 2007; Castillo, 2014). Is it possible, then, that socialization within the military could indoctrinate non-core soldiers into acceptance of the communal vision offered by Type1 and Type2 combatants (Ardant du Picq, 1904)? Unlikely; in fact, top-down socialization may be actively resisted by non-core groups, leading the military itself to become a site of contestation over nation-building. The military is not a closed system.

Instead, it must struggle as an institutions against an individual's group identification and exposure to state-directed marginalization or violence. In this view, individuals carry their prior identities and allegiances into basic training and retain sufficient agency to subvert, deflect, or ignore socialization pressures, and to counter-mobilize to protect salient identities. Socialization thus has differential effects among core and non-core soldiers, driving a wedge further between them. Put differently, the transformation of microlevel solidarity into true national loyalty is blunted by exposure to state-led policies of marginalization and outright repression.

These strong group identities and collective ties carry onto the battlefield. Violence hardens ethnic identities, cementing divisions between core and non-core soldiers and inhibiting cooperation. Exposure to violence also lowers trust and altruism toward other groups (Canetti and Lindner, 2014), undercutting the emergence of small group bonds that are often cited as central for resilience (Marshall, 1947; Shils and Janowitz, 1948; Stouffer et al., 1949; Henderson, 1985; Stewart, 1991; Watson, 1997; Wood, 2003; Weitz, 2005; Hamner, 2011). In Type1 and Type2 states, wartime creates bands of brothers organized around the central core/non-core axes of ideational contestation. The now-concrete prospect of fighting in a war, and possibly dying in it, on behalf of a regime that has systematically marginalized or repressed a soldier's group, creates both additional grievances and motivation, if needed, to seek escape through desertion. A legacy of marginalization or violence against non-core groups and the soldiers drawn from them now emerges as ethnic ties become the principal means for organizing collective action in the form of mass desertion.

Militaries employing non-core soldiers are not blind to the risks of doing so, of course. They will endeavor to minimize or compensate for these factions through a variety of management strategies. These may take for the form of skewed force employment, where non-core soldiers are confined to rear areas to shield them from the enemy's siren song of desertion. States may build increasingly intrusive monitoring mechanisms to evaluate soldier sentiment (i.e. polls, perlustration, or spies and commissars). The composition of units may be altered to ensure that loyal core soldiers are blended into potentially suspect non-core units; officers, too, may be drawn exclusively from reliable populations. Specialized units known as blocking detachments are often employed to bar likely desertion routes and to deter soldiers from undertaking such actions through extrajudicial executions that sometimes extend to families, and even whole ethnic groups, in rear areas or on the

home-front (Lyall, 2016). Many of these measures come at the cost of reduced fighting efficiency, however, as simplified tactics and reduced organizational flexibility result in increased casualties and a heightened sense of grievance among those bearing these costs.

In particular, the severity of the penalties incurred by identity-induced inefficiencies rests partly on the adversary’s ability to exploit these weaknesses and to intensify the tradeoffs facing compromised Type1 and Type2 combatants. Opponents can prey upon these schisms using propaganda that encourages soldiers from disgruntled groups to flee or defect, including offering cash or other material incentives. Enemies aware of these schisms can also direct their offensives directly at these non-core soldiers in the hopes that they will break. An army’s internal ideational vulnerabilities can have far-reaching consequences for how, where, and when enemies attack, as well as the ability of Type1 and especially Type2 armies to compensate for known weaknesses.

These negative effects and feedback dynamics are not confined to non-core groups. Soldier compliance can also breakdown within units staffed by members of the core group if they witness mass desertion by non-core soldiers. A cascade of indiscipline can originate in non-core soldiers but then swallow even core soldiers as they come to believe that the war can no longer be won. Core soldiers’ calculations here are based on perceptions of victory. Poor performance, including crumbling cohesion, among non-favored groups can influence beliefs within the remaining combat forces that the prospects of victory are slim (Rosen, 2005). Units comprised of favored groups may therefore also break, though they are likely to do so later than units staffed by non-favored members. A clear sequence is present: non-core soldiers are most likely to desert first (“first-movers”), followed by blended units where ethnic ties are only partially disrupted (“joiners”), and then loyalist units drawn principally from core soldiers (“laggards”). Unit composition thus offers an important mediating variable between prewar identity type and wartime mass desertion (on this point, see McLauchlin 2015).

2.3 Hypotheses

This discussion suggests several hypotheses. We should expect, for example, that the likelihood of mass desertion increases as military inequality increases: Type2 combatants should have the highest recorded instances of mass desertion, followed by Type1 combatants, and then Type0 combatants. These empirical expectations hold true regardless of historical

era. That is, we should observe identity-induced mass desertion regardless of the prevailing military technologies and their lethality. At the level of individual armies, we should expect mass desertion to follow a specific sequence: non-core soldiers desert first, followed by “mixed” units, and then core group-only units. And, finally, at the battle level, mass desertion need not track with casualties inflicted on a particular side. We should observe mass desertion to occur at multiple temporal points — before, during, and after battles — as well as spatial locations, including both front-line units and those safely deployed in the rear. Not all of these hypotheses can be tested crossnationally, at last not with existing data. I use the case studies below to test hypotheses about sequences and the varied timing and location of mass desertion.

3 Alternative Explanations

The decision-making leading soldiers to desert is undoubtedly nuanced; multiple factors are likely at work. Though leading explanations of military effectiveness have typically ignored desertion, their logic can be extended to suggest alternative hypotheses.

Regime type explanations, for example, suggest that democracies should be less prone to mass desertion for four reasons. First, democratic soldiers may have higher morale since they are fighting (often voluntarily) on behalf of a government that, via popular election, is viewed as trustworthy and legitimate, especially compared to autocratic regimes.¹² Second, democratic armies may possess superior loss-exchange ratios—due to greater soldier initiative, higher morale, or technological advantages conferred by their capitalist economies—that forestall mass desertion since their soldiers suffer far fewer losses than they inflict. Third, soldiers in autocracies may be more willing to attempt desertion when fighting democracies since they do not fear abuse if captured. Wallace (2012) has demonstrated that democracies are 54% less likely to abuse prisoners of war than autocracies, for example (see also Reiter and Stam 2003, 66-67). Finally, autocratic regimes are likely to undertake coup proofing efforts that undercut military effectiveness (Pilster and Böhmelt, 2011, 2012), possibly contributing to increased relative risk of desertion.

Castillo (2014) has also proposed a nuanced “cohesion theory” that attributes a military’s ability to resist collapse in the face of possible battlefield defeat to two factors: the

¹²The evidence for this proposition is mixed, however. See Reiter and Stam 2002, 60-65; Reiter and Stam 1998 and Biddle and Long 2004, 541.

degree of a regime's control over a population; and the degree of autonomy the armed forces possess for training (Castillo, 2014, 3). In this view, regimes with totalizing visions (such as Communism, Fascism, and nationalism) and with autonomous militaries should fight with the most determination and cohesion, especially when victory is slipping away. These ideologies instill unconditional loyalty among citizens while creating a cadre of hard-core military supporters. In turn, military autonomy facilitates the promotion of these hardline supporters while pressuring other, less committed, individuals to stand fast. By extension, autocratic regimes with national ideologies and autonomous militaries should have the lowest incidence of mass desertion. Note that this prediction runs exactly counter to that of the identity type argument proposed here: it is precisely regimes with totalizing identity projects that should have the greatest probability of experiencing mass desertion.

We might also expect that mass desertion is a function of material preponderance: the relatively stronger the state (coalition), as measured by prewar capabilities or deployed forces (Desch, 2008; Beckley, 2010), the lower the risk of mass desertion. Material preponderance may forestall desertion by convincing soldiers that they are more likely to win and that setbacks, if encountered, are likely only temporary rather than fatal to the war effort. Yet this logic could be reversed. Larger armies may be subject to greater principal-agent problems, especially in the twentieth century, when the ability to monitor and sanction dispersed soldiers on the modern battlefield is reduced. We might then expect that relatively larger armies are *more* likely to experience desertion since the opportunities to desert without repercussion are more plentiful.

These structural explanations contrast sharply with the recent microlevel turn in civil war studies (Kalyvas, 2006). Instead of emphasizing relatively static variables, civil war scholars have privileged contingent, often fast-moving, dynamics in explaining wartime behavior. A partial list of potential battlefield factors that might contribute to desertion includes: psychological factors such as fear and stress (Keegan, 1976); more prosaic concerns such as hunger and inclement weather; poor leadership (Hamner, 2011); the absence or destruction of small-unit bonds, typically in grinding wars of attrition (Shils and Janowitz, 1948; McPherson, 1997); the breakdown of sanctioning or other coercive mechanisms (Weinsten, 2007; Daines, 2008); a would-be deserter's distance from home, and the odds of successfully hiding from authorities (McLauchlin, 2014); and suffering crushing defeats that destroy any illusions about the war's eventual outcome (Christia 2012; but see Woldemariam 2014).

Taken to its logical extreme, a microlevel perspective rules out generalization; to paraphrase Tolstoy, cohesive armies are all alike, while armies that break do so in their own unique way. “However valuable comparative perspectives are,” Hew Strachan has written, “different factors operate in different armies at different times in different theatres. For the historian, desertion, mutiny, absence without leave — these all admit of particular and specific causes” (Strachan, 2006, 215).

While few would dispute that battlefield dynamics, especially casualties, are important, a too-narrow focus on these factors can lead to the omission of structural factors that condition how (and when) these dynamics unfold. In addition, these dynamics are often difficult to capture given the absence of crossnational time-series battle-level data. As a result, the empirical strategy detailed below combines crossnational testing of (mostly) structural factors with paired historical comparisons designed to investigate battlefield dynamics at closer range than possible with large-N regression.

4 Empirical Strategy

I adopt a three-stage mixed-methods empirical strategy. First, crossnational regression is used to estimate the association between identity type and mass desertion in the face of competing explanations. Following Lyall and Wilson (2009), I divide the 1800-2011 timeframe into two periods — the pre-modern (1800-1917) and modern (1918-2011) eras — to reflect technological changes and the increased lethality of conventional wars over time (Biddle, 2004; Lyall, 2010). Rather than treating the entire 1800-2011 period as an undifferentiated sample, this periodization approach facilitates direct investigation of whether the relationship between variables such as regime type, power, and identity type remained consistent across different eras of warfare.

Next, I use Coarsened Exact Matching (CEM) to remove imbalances between Type2 and other combatants that might confound our estimates (Iacus, King and Porro, 2012). I construct a two-control group comparison: first, Type2 combatants are matched with controls drawn from Type0 combatants, where evidence of shifting from low to high military inequality should manifest itself in a greater incidence of mass desertion. Second, Type2 combatants are compared to a control group comprised of both Type1 and Type0 combatants, where we should expect some attenuation in the effects of high military inequality on mass desertion. This two-control group approach removes imbalances between combatants

while also providing assurances that the identified causal effects are robust to choice of control group (Rosenbaum, 2010, 116-118).

Third, I use a purpose-built matching script to select a pair of closely matched combatants for qualitative process-tracing from identity type to mass desertion. Case selection via matching has several advantages (Lyall, 2015*b*; Nielsen, 2014; Weller and Barnes, 2014). It screens out potential alternative explanations and their associated causal pathways at the design stage, greatly simplifying the tracing of remaining causal processes. The identification of a counterfactual case provides additional confidence that the proposed mechanisms are present in only one, not both, combatants. It also avoids no-variance designs where only armies with desertion are examined (e.g. Watson 1997). The counterfactual case also provides a baseline for how a similarly constituted combatant translates its combat potential into actual battlefield performance. If the matching is close, the observed difference in combat power (in our case, desertion) should be attributable to the treatment (here, identity type) only. Finally, case selection becomes transparent and replicable. As an added hurdle, the control case was chosen randomly (via random seed) from the pool of available controls, restricting the researcher’s ability to “cherry pick” a convenient counterfactual.

4.1 Independent Variable: Identity Type

As noted above, the independent variable ID TYPE is operationalized as a three-fold construct ranging from low (“0”) to medium (“1”) to high (“2”) levels of military inequality. *Military inequality* here is defined in terms of ethnic-based inclusion, marginalization, or repression and is directed by the state against its own internal population; colonial possessions are excluded from this conceptualization. Military inequality was coded along two dimensions: (1) whether restrictions were placed on an ethnic group’s access to military service, including (a) ability to serve as officers and (b) ability to serve in all combat branches; and (2) whether the ethnic group was subjected to state-directed violence, including systematic repression (e.g., an ongoing counterinsurgency campaign or genocide), deliberate starvation, or population displacement. “High” levels of military inequality are associated with state repression and severe restrictions targeted at one or more ethnic groups; national security is a private good. “Medium” levels are associated with restricted promotion patterns or service in selected branches, often less glamorous logistics or labor battalions; the state does not engage in repression in these instances. “Low” military in-

equality is marked by the near absence of restrictions on service and the total absence of violence; national security here best approximates the “public good” ideal. To avoid endogeneity with potentially demonizing prewar rhetoric, identity type is measured in a temporal window spanning one to five years prior to the war’s start. Alternative one and ten year temporal windows were also coded as robustness checks.¹³

4.2 Additional Variables

Multiple variables are also included to account for alternative explanations. `REGIME` follows the existing literature (Downes, 2009; Reiter and Stam, 2002, 40) by assigning Polity2 values from the PolityIV dataset for each combatant (Jagers and Gurr, 2004). Measures are taken one year prior to the conflict, and the variable is rescaled as a 21-point index, with values ranging from 0 (highly autocratic) to 21 (highly democratic). `DEMOOPP` denotes whether a combatant is facing a democratic opponent. States with a raw Polity2 value of ≥ 7 are considered democracies. `INITIATOR` records whether a combatant initiated the war. Initiators may be less likely to observe mass desertion since their leaders have selected into a war, possibly reflecting higher confidence in their military machine. An interaction term for regime type and initiator ($\text{REGIME} \times \text{INITIATOR}$) tests whether democratic initiators are least likely to experience mass desertion (Reiter and Stam, 2002, 64-70).

To test material preponderance arguments, I include `RELATIVE POWER`, which measures the relative share a combatant possesses of the total ground forces fielded during the war. If a combatant is part of a coalition, I measure relative power as a function of that coalition’s share of total fielded forces. `GREAT POWER` indicates whether a combatant was considered a Great Power by the Correlates of War.¹⁴

New data was also collected to account for several properties of each combatant’s army. `VOLUNTEER` captures whether a military recruited the majority (50%+1) of its soldiers through volunteer (paid) service. Existing research suggests that volunteer armies suffer far less casualties than conscript armies, perhaps rendering them less likely to break under fire (Horowitz, Simpson and Stam, 2011). Drawing on a 7-fold classification scheme of recruitment strategies, `COMPOSITE` records whether two or more methods—ranging from

¹³Coding instructions and sources are outlined in the codebook and project bibliography.

¹⁴These combatants are: Austria-Hungary (1800-1918), Germany (1871-1945), Italy (1860-1943), Russia/USSR (1800-1991), France (1800-1945), United Kingdom (1800-1945), United States (1898-), and Japan (1895-1945).

volunteer to conscript to coerced—were used to fill the ranks.¹⁵ It is plausible that armies with composite systems are more prone to desertion due to greater problems of command and control; such institutions may also reflect the need to force draft already reluctant populations. `STANDING ARMY` indicates whether a combatant possessed a prewar standing army. Mass desertion may be more likely among armies cobbled together once a war begins rather than standing armies that have already trained together.

`DISTANCE` measures the distance in kilometers (logged) between the combatant’s capital and the war’s first battle. We might expect, for example, that as distance grows, the opportunities for desertion decrease, suggesting that desertion should take place close to home, especially if those homes are in mountainous terrain where renegades can hide from state authorities (Reese, 2011; McLauchlin, 2014). `DURATION` records the war’s length in (logged) days. These data capture the length of time between first and last major armed engagements, not formal declarations or cessation of war. As the war drags on, the likelihood of mass desertion should increase, as hardships and battlefield losses cumulate, undercutting morale. `CIVIL WAR` designates whether a war was fought between two (or more) combatants who shared the same political institutions. `NCOWCOMBATANT` records whether a combatant is not recognized by COW as a state. These final two variables allow us to test whether our findings hinge on the inclusion of civil wars or non-COW states in our new population of combatants and wars.

5 Findings: Full Sample with Periodization

Is mass desertion associated with identity type? As Table 1 illustrates, I first examine the relationship between `ID TYPE` and mass desertion alone (Model 1), then add variables from leading alternative explanations (Model 2) before reestimating the models with a battery of control variables (Model 3). In all models, `ID TYPE` is strongly associated with the incidence of mass desertion. I then reestimate these model for the modern era (Models 4-6). Once again, `ID TYPE` is highly statistically significant and positively associated with mass desertion; as military inequality increases, so does the probability of experiencing mass desertion. Figure 1 plots the likelihood of mass desertion occurring across identity

¹⁵We code three types of strategies—volunteer, conscript, and coerced—directed toward internal populations. We code an additional four—volunteer, conscript, coerced, and mercenary—directed toward foreign (i.e. outside the belligerent state) populations.

types for each historical two era.

[Figure 1 about here.]

Using *Clarify*,¹⁶ the substantive effect of a shift from Type0 to Type2 combatants is a 37% increase in the likelihood of mass desertion (95% CI at [22%, 51%]) in the pre-modern era. Put differently, if the base risk of desertion is about 25% for an inclusionary state, then Type2 combatants possess a 62% risk. A shift from Type0 to Type1 combatant is associated with a smaller 17% increase in the likelihood of mass desertion (95% CI at [10%, 24%]). Moving from a Type1 to Type2 combatant results in another 20% increase in the likelihood of desertion (95% CI at [12%, 27%]).

For the post-1917 era, a shift from a Type0 to Type2 combatant is associated with a 42.5% increase in likelihood of desertion (95% CI at [26%, 59%]). The base risk for Type0 combatants in this era is 10%, compared with 49% for Type2 combatants. Shifting from a Type0 to Type1 combatant results in a 15% increase in the likelihood of mass desertion (95% CI at [8%, 24%]). A move from Type1 to Type2 combatants is associated with a much larger 27% increase (95% CI at [16%, 37%]). These findings provide initial evidence of a causal effect for identity type; as the “dosage” of military inequality increases, the likelihood of desertion also increases in both historical eras. These results also suggest that Type2 combatants are most prone to breakdown, and are especially likely to do so after 1917.

Intriguingly, none of the variables privileged by competing explanations appear associated with mass desertion. REGIME, for example, is not significant in the pre-modern era, and only (barely) reaches conventional significance in the modern era, though in the opposite direction than predicted. Taken together, regime type and initiator status, along with their interacted term, is not associated with mass desertion. Nor is having a democratic opponent apparently relevant for explaining desertion. The coefficient flips direction across the pre- and modern eras and only just reaches statistical significance once.

And what of material capabilities? Here, too, we find that measures of relative combatant (coalition) strength offer little explanatory leverage. RELATIVE POWER is positively

¹⁶All substantive interpretations were obtained using first differences in *Clarify*. All continuous variables were set at their mean except REGIME, to avoid partial values that do not represent real regime types (Hanmer and Kalkan, 2013). All dichotomous variables were set at median values; $K=1000$ simulations were estimated. King, Tomz and Wittenberg 2000; Tomz, Wittenberg and King 2003.

associated with desertion, suggesting that as armies grow in relative size, desertion becomes *more* likely. Yet these coefficients never reach statistical significance in any model or historical era. Great Powers are consistently negatively associated with desertion, perhaps indicating that a subset of the most powerful states have sufficient resources to deter mass desertion. Once again, however, GREAT POWER is only significant (and barely so) in one model. These (non-)findings indicate that mass desertion is not the bane of weak states but affects all combatants. More tentatively, these findings suggest that soldiers may not be using force ratios to guide their decisions about the prospects of victory or their decisions to desert.

Perhaps more surprisingly, there is no evidence to support the claim that certain types of recruitment or postures are more prone to mass desertion. Volunteer armies are negatively associated with desertion, while composite armies are positively associated, but in neither case do these coefficients reach conventional statistical significance. Standing armies are also no less vulnerable to desertion; indeed, in this case the coefficient is not only insignificant statistically but reverses its sign across different historical eras.

Civil war are strongly associated with desertion, far more so than “classic” interstate wars, though only for the pre-modern era. There are relatively few civil wars in the pre-1917 era, however, and so we should be careful when interpreting the result. A shift from fighting in a non-civil war to a civil war is associated with a 28% increase in the likelihood of a combatant experiencing desertion (95% CI at [14%, 40%]). Similarly, the addition of non-COW combatants to our dataset is not driving these results; non-COW states are actually negatively associated with desertion in the pre-modern era. A shift from COW to non-COW status is associated with a 16% decrease in the likelihood of experiencing desertion (95% CI at [−31%, 0%]).

Finally, as a war drags on, the likelihood of a combatant experiencing mass desertion increases across all models and historical eras. Moving from the 10th to 90th percentile of war duration produces an estimated 33% increase in probability of desertion in the pre-modern era (95% CI at [20%, 46%]). In substantive terms, a shift from the 10th to 90th percentile is equivalent to moving from short three week wars (Yom Kippur War, Napoleon’s Prussian Campaign of 1806, or France versus Tukulor Empire in 1893) to four year wars such as Mesopotamian Front in WWI (1914-18), the Pacific Campaign in World War II (1941-45), and the 1991-95 Croatian War of Independence. A similar shift from 10th to 90th percentile is associated with a 25% increase in the modern era (95% CI at

[11%, 41%]). Given these large changes in war duration, the substantive effect of additional combat days is fairly modest.¹⁷

[Table 1 about here.]

5.1 Robustness Checks

These findings were subjected to multiple robustness checks (reported in the SA). Checks include: (1) replacing REGIME with DEMO7, a binary variable denoting whether a combatant’s Polity2 score is ≥ 7 , the common threshold for a full-fledged democracy;¹⁸ (2) an alternative conception of power (INIT REL POWER), which measures relative (coalitional) power using forces initially deployed at the war’s first battle; (3) re-estimating all models using only COW-recognized combatants and (4) only COW Inter-State Wars (Ver.4)-recognized wars; (5) re-estimating all models with an indicator variable for whether a combatant was “born” during the war (WAR BIRTH), which may increase the probability of observing desertion; and (6) reestimating all models with robust standard errors clustered on campaign code to account for war-level characteristics. In all analyses, ID TYPE’s statistical significance and substantive importance remains unchanged.

6 Matching

We might worry, however, that Type2 combatants differ sharply from inclusionary states. Perhaps Type2 states are on average less powerful, for example, or more autocratic, two factors that might explain differences in the onset of mass desertion.

I therefore employ Coarsened Exact Matching (Iacus, King and Porro, 2012) to adjust for imbalances across combatants. To do so, I recast ID TYPE as a treatment variable that takes two forms: (1) TREAT1, which compares Type2 to Type0 combatants; and (2) TREAT2, which compares Type2 combatants to controls drawn from both Type1 and Type2 combatants. This two-control group comparison has several important advantages, including increasing the number of available control observations and ensuring that findings

¹⁷Note that this association says little about the *timing* of desertion. Early desertion may actually prolong wars by preventing (stronger) states from delivering knock-out blows. Long wars may also mechanically increase opportunities for desertion. Further research with more fine-grained data is required to unpack this relationship.

¹⁸I also reestimate these models using an alternative regime classification scheme Weeks (2014) for the 1929-2007 era.

are robust to multiple specifications of the control group (Rosenbaum, 2010, 332-39). We should expect some attenuation of identity type’s causal effect as we compare estimates generated with TREAT0 and TREAT1 since the latter includes states do restrict military service and so are at higher risk of observing mass desertion.

I then reestimated Models 1-6, keeping the same periodization but making a few minor adjustments necessitated by the matching procedure. I dropped DURATION since this could be interpreted as a post-treatment covariate; matching on duration might mistakenly introduce bias into our estimates. I also removed three control variables — JOINER, COMPOSITE and VOLUNTEER — since they were not significant in any model. Finally, I replaced REGIME with a binary indicator for democracy (DEMO7) to improve the closeness of matching fit across treatment and control groups.

Table 2 details estimates derived from CEM. On balance, ID TYPE remains statistically significant and substantively important in every model across both control groups. There is, as expected, some attenuation of effect size once Type1 states are introduced as possible controls. This attenuation suggests that while high military inequality is certainly associated with desertion, Type2 states are especially prone to experiencing mass desertion regardless of historical era. The effect of shifting toward high military inequality is especially pronounced post-World War I, suggesting that these combatants are paying an especially high battlefield price for ruling through repression.

[Table 2 about here.]

Speaking substantively, odds ratios derived from Model 9 estimates suggest that a shift from Type0 to Type2 combatant is associated with a 4.1x increase in the odds of observing desertion (95% CI at 1.58x, 10.6x] in the pre-modern era. Shifting from the two-control group (Type0+Type1) to Type2 combatants returns a similar estimate of a 4.3x increase in the odds of observing desertion (95% CI at 1.7x, 10.7x] in the pre-modern era.

The magnitude of the shift between control groups and Type2 combatants is particularly stark in the modern era. Moving from a Type0 to Type2 combatant is associated with a 16x increase in the odds of experiencing mass desertion (95% CI at 4.5x, 58x]). Using the two-control group comparison, we still observe a 14.7x increase in odds of mass desertion occurring (95% CI at 5.7x, 38.5x]). While some attenuation is observed, these odds ratios underscore the danger associated with prewar repression in the modern era.

7 Historical Evidence from Matched Cases

The Khanate of Khoqand, a repressive Type2 combatant, and the Sultanate of Morocco, a Type0 inclusionary state, provide the empirical basis for process-tracing the causal effects of identity type on mass desertion. As outlined in Table 3, these two combatants are directly matched on 12 covariates. This initial matching proved so close that these cases are similar, if not identical, on another 17 contextual covariates not measured by the large-N dataset.¹⁹

Khoqand’s military was wracked by mass desertion during its disastrous 1864-65 war against Russia. A trickle of deserters at the war’s outset became a flood by the fall of Tashkent in 1865, culminating in the spectacle of 5,000 deserting calvary drowning in the nearby Chirchik River while fleeing Russian forces (Bababekov, 2006*b*; Bobozhonov, 2010; MacKenzie, 1974). Morocco’s army, by contrast, displayed far greater cohesion during the Hispano-Moroccan War (1859-60) despite possessing a less favorable force ratio vis-a-vis Spain’s expedition. Indeed, its generally high morale would complicate the Sultan’s peace negotiations as unbloodied units sought to engage Spanish forces before the war’s end (Hardman, 1860; Griffiths, 1897; de Alarcon, 1988).

Each conflict generated a surprisingly extensive trail of primary documents from contemporary observers, though much of it remains to be systematically examined, particularly

¹⁹Figure 1 in the SA plots these cases against the distribution of all combatants by regime type and share of initially deployed forces.

in Khoqand’s case (Morrison, 2014). While space constraints do inhibit exhaustive case studies, I draw on Russian, Spanish, and French-language primary materials to detail each combatant’s identity type, prewar military practices, and battlefield desertion.²⁰ There are, of course, gaps in the historiography; these sources are often weakest when considering the viewpoint of Khoqandi and Moroccan participants, for example (Hamed, 2010; Beisembiev, 2008; Martin-Màrquez, 2008). Nonetheless, it is possible to reconstruct evidence of the pathway from identity type to (non-)desertion by triangulating across multiple sources.

7.1 Matched Covariates

Khoqand and Morocco may appear, at first glance, to make for strange bedfellows. Yet these combatants are remarkably similar across many covariates that might influence military effectiveness. Most simply, these two combatants are fighting their wars only five years apart, helping to control for macrolevel trends such as advances in weapon technology and the rise of nationalism that might explain differences if combatants are not matched in the same historical era.

Both combatants were theocratic dictatorships. More formally, their Polity2 values are nearly identical (Khoqand at -7, Morocco at -6), effectively holding regime type constant. Neither combatant was faced with a democratic opponent. Nor did these combatants initiate their wars; both wars were strictly two-combatant affairs, and so neither leader selected into the conflict as a “joiner.” Neither war was a civil war.

Khoqand and Morocco possessed similar numerical superiority over their opponents; their forces represented an average 66% of initially deployed forces, for example. These combatants could muster armies of comparable size, with average estimates of 50,000 and 55,000 soldiers for Khoqand and Morocco, respectively.²¹ It is true that Khoqand enjoyed a more favorable ratio once the total number of soldiers deployed is taken into account. Russian forces remained small throughout the war, barely exceeding 4,000 soldiers. Spain, on the other hand, continued to ship reinforcements, reaching about 40,000 for the entire campaign. Morocco therefore only had 58% of total deployed forces, compared with Khoqand’s 90% of total fielded forces. Yet this imbalance is puzzling for material preponderance explanations: it is the military with the *more* favorable power balance that deserted. In addition, neither combatant was a Great Power; Khoqand is not even recognized by COW

²⁰I include hard signs when transliterating pre-Revolutionary Russian.

²¹Estimates of up to 100,000 were recorded for each case but are not judged as credible by most historians.

as a state, while Morocco barely qualified (in 1847) at the war’s outset.

Both armies also fought their first battles at remarkably similar distances from capital cities; the difference is a mere 57 kilometers. Khoqand and Morocco also had very similar military machines: both armies were standing, had volunteers within their ranks, but also relied on multiple forms of recruitment to fill their ranks.

7.2 Contextual Covariates

Building on this initial matching, a closer investigation reveals that these cases share similar values for another 17 covariates. These contextual factors are omitted in the quantitative analysis above but may be important determinants of desertion.

These armies, for example, had similar skill levels, with both practicing 19th Century-style combined arms doctrine. Each combatant fielded firearm-equipped soldiers, large calvary formations, and artillery detachments of surprisingly good quality. While not approaching the complexity of 20th Century combined arms, these armies nonetheless sought to integrate different branches on the battlefield. Both combatants used calvary to screen infantry movements, artillery as a shock force to support infantry assaults, and complex ambushes blending all three branches. Khoqand and Morocco also built lines of fortifications as defensive bulwarks. Each military was also familiar with Western tactics and technology. Both had agreements in place with the United Kingdom for arms and training (especially artillery).²² And each had European advisors embedded within their command structures (Dubovitskii and Bababekov 2011, 54-55; Srhir 2004).

Terrain can also shape battlefield outcomes (e.g. Reiter and Stam 2002). Here, however, each war was fought in roughly similar terrain, helping to control for possible differences. The war’s duration, too, might explain mass desertion, with longer wars creating more opportunities for would-be deserters to flee. At first glance, there appears to be a large discrepancy in war duration; Khoqand’s war lasted 378 days from first battle to Tashkent’s fall, while Morocco’s war was only 126 days. Yet this difference can be deceiving. No combat between Khoqandi and Russian forces occurred from 3 December 1864, when a Cossack detachment (*sotni*) was crushed, to General Cherniaev’s resumption (8 May 1865) of his march on Tashkent. Removing this pause leaves us with war duration of 223 days, or only 97 days longer than Morocco’s fight. If anything, this fighting lull should have granted

²²Khoqand also had diplomatic ties with the Ottoman Empire, Afghanistan, Russia, and was diplomatically recognized by China via its first “unequal treaty.” See Fletcher 1978; Newby 2005.

Khoqand the breathing space needed to regroup, *lessening* the likelihood of desertion.

Nor can we ascribe these differences in desertion to variable willingness to sanction soldiers violently for battlefield failure or insubordination. Senior military leaders, for example, were executed in both cases after defeats (Hardman 1860, 220; Tashkandi 2003, 7,67-68); in Khoqand's case, high-ranking officers were strapped to cannons and executed by artillery fire. More generally, each army used corporal punishment (or its threat) to maintain discipline in the ranks.

Neither combatant was a new state; each could trace their lineage back to the early eighteenth century.²³ As a result, both combatants had lengthy prior histories with their eventual opponent. Khoqand had been slowly succumbing to Russian encroachment since at least 1852 as Russia worked steadily to compromise Khoqand's initial line of fortifications at the Amu Darya river. Morocco, too, had clashed recently with Spain; indeed, it would be Morocco's chronic raiding in the Ceuta Enclave (held by Spain) that ignited the war. Moreover, both combatants had traded blows with another leading Power. Khoqand had fought (and defeated) Chinese forces in the 1830s, while Morocco had clashed with France in 1844 at Isley, a stinging defeat that pushed the Moroccan state (the Makhzan) to modernize its military along Western lines. Both combatants thus had equal exposure to Western technology and method of combined arms war-fighting.

Moreover, in each case these states were facing opponents bent on colonizing part, if not all, of their territories. Fighting on their "home turf" against a foreign invader, soldiers likely had higher morale and cohesion as they struggled to save their families, if not the state itself, from possible destruction (Castillo, 2014, 42).

These cases are also remarkably similar given the religious cleavage involved. Both wars featured regimes that legitimated themselves using Sunni Islam pitted against Christian (Orthodox) foes.²⁴ In that vein, the war's purposes, and the regime's ability to convince its population that these are worth fighting and dying for, can also affect soldier motivation (Freedman, 2005). In our case, both regimes wrapped their war effort in the language of Jihad, appealing to Islamic notions resistance to infidels to bolster military effectiveness.

Politically, both regimes were led by new leaders. Khoqand's ruler, 'Alimqul, had only consolidated power after a coup two years before the war, while Muhammed IV

²³Khoqand was founded in 1709; the Alaouite Monarchy, in 1631.

²⁴Biddle and Long (2004) include dummy variables for combatants' primary religious affiliations; they find that these simple dummy variables provide most of the explanatory power in models explaining battlefield loss-exchange ratios (p.16).

ascended to the throne on the eve of war with Spain. Population sizes and density were also roughly similar; Khoqand had an estimated 5-6 million subjects, while Morocco was larger at about 8 million. Each population was riven with deep sectarian, ethnic, and tribal fissures that greatly complicated each regime's efforts to tax and police dispersed populations. As a result, maintaining the regime's legitimacy was of paramount concern for each ruler, especially since these cleavages could be exploited by foreign states for battlefield advantage.

Finally, civil-military relations can also affect military effectiveness (Huntington, 1957; Quinlivan, 1999; Talmadge, 2013; Castillo, 2014). Here, however, each ruler acted as supreme military commander, determining strategy and, in many cases, overseeing its battlefield execution. Each ruler also relied on a series of senior military commanders who were responsible for recruiting and disciplining their own formations. Overarching military strategy, including decisions of where and when to fight, remained the ruler's prerogative, however. In 'Alimqul's case, this centralization proved fatal; he was felled by a Russian bullet during his unsuccessful defense of Tashkent.

[Table 3 about here.]

8 Process Tracing

In the sections below, I use a structured, focused comparison (?) to guide process tracing of how identity type conditions the likelihood of mass desertion. I first detail each combatant's prewar identity type and military practices. I then examine the sequence of desertion unfolded in Khoqand's, but not Morocco's, military.

8.1 Khoqand: A Type2 Identity Project

The size of Western Europe, Khoqand was an ethnically heterogeneous state, with a wide array of potential schisms. This diversity was not problematic per se; instead, these potential faultlines became salient precisely because a revolving door of rulers had resorted to rule-by-ethnocracy as a way of maintaining power. Neither allusions to Khoqand as the successor state to Genghis Khan nor the use of Islamic precepts (and especially Sharia law) could paper over the cracks in the foundation caused by nearly constant efforts to repress rival claimants to power (Bobozhonov, 2010, 679,681).

A partial list of these schisms includes: (1) a divide between sedentary populations who traditionally ruled the state (Uzbeks, Sarts, and Tajiks) and nomadic populations such as Qipchaks/Turks and Pamirs/Kirghiz (Manz, 1987); (2) intra-group tensions, as struggles for leadership also continued amidst a more generalized inter-group struggle for power; (3) appeals by repressed groups to outside powers such as Bukhara and Russia; and (4) a regional tension between “older” western lands and recent territorial acquisitions such as Tashkent and the Ferghana Valley.

More specifically, Khoqand is coded as a Type2 combatant because of nearly constant state-directed violence against various groups for 25 years prior to the 1864-65 war. Some 25,000 Qipchaks alone were killed in a single 1853 uprising; as one historian wrote, the Khoqandi regime “sought to exterminate the entire male population of Qipchaks” (Manz, 1987, 269). There would be 21 leadership changes between 1841 and 1865 (Beisembiev, 2008, 18), and as each Khan was replaced, his successor sought to impose his own group’s dominance, constantly reshuffling Khoqand’s ethnic and tribal hierarchy (Bobozhonov, 2010, 242-45). ‘Alimqul, himself a Qipchak, killed nearly 4,000 Kirghiz upon taking power in 1862 simply as a precautionary measure. In 1863-65, internal displacement became state policy via a sweeping land confiscation program. As with all Central Asian Khanates, Khoqand also did a brisk business in slave-trading, including trafficking of Russians (Hopkins, 2008).

These fissures inevitably bled over into military recruitment. The top seven ranks (out of 14 total) were open only to Uzbeks, while nomadic populations comprised the bulk of infantry and calvary (Bababekov, 2006*a*, 44-45). This latter category created a particular dilemma for ‘Alimqul: nomads made excellent horsemen but their mobility facilitated both desertion and coups, complicating military planning.

Ruling-through-repression therefore contributed to the erosion of Khoqand’s combat potential in two ways. First, the military became a garrison force designed to prevent internal unrest. While the military was a standing, firearm-equipped, force, its recruit pool and its loyalty hinged on the leader’s ability to tap into ethnic and tribal networks. The military did have impressive mobilization capacity: by the mid-1850s the Khan could mobilize 40,000 soldiers in only 20 days and deploy with them on campaign. Yet chronic warfare (or its threat) dissipated Khoqand’s strength. By 1860, the Khan could only sortie 25,000 soldiers in the same time frame, a marked reduction (Bababekov, 2006*a*, 46).

Second, as Khoqand moved to block Russian encroachment, it targeted internal populations that might (and, in many cases, did) support Russia’s advance. Even during

the war itself—notably, before battles at Chimkent and Tashkent—‘Alimqul ordered his forces to violently repress locals to prevent their defection. These actions reduced the pool of willing defenders even further as Uzbeks and other groups (see below) withheld their support, or actively worked to undermine, the war effort. Repressing locals also diverted forces away from actually fighting Russia’s military (Bobozhonov 2010, 274-76; Bababekov 2006*b*, 25-26). Given that Khoqand’s sole advantage lay in its highly favorable force ratio, any dissipation of its combat power would be problematic.

8.2 Desertion

Given a history of prewar violent repression, skewed military recruitment, and the mobility of repressed (nomadic) calvary, it is unsurprising that desertion from Khoqand’s ranks was rampant. I estimate that 30-40% of Khoqand’s total mobilized force deserted during the war.²⁵ Mass desertion began early; evidence suggests that deserters were already creeping away after initial skirmishes at Aulie-Alta (2 June 1864) and Chimkent (22 July 1864). Khoqand’s army completely broke at Tashkent. An estimated two-thirds of its remaining 30,000 defenders deserted as Russian forces stormed the city, including the aforementioned 5,000 calvary who drowned while fleeing (Terent’ev, 1906, 313-320).²⁶

Three observations are especially relevant. First, Khoqand’s forces were mostly unwilling to stand against concentrated Russian fire at close-range. Morale was generally low, and fortresses were often abandoned after a few hours of fighting. Despite enjoying highly favorable force ratios, Khoqand’s ranks were characterized by “great disorder” and “terrible panic” even after only minimal casualties. Instead, groups of soldiers would use the opportunity of a chaotic battlefield (or nighttime respites) to sneak away (see, for example, Bababekov 2006*b*, 19 and Tashkandi 2003, 64-65).

Second, and perhaps most importantly, Khoqand’s army broke along ethnic and tribal lines. Typically, deserters were drawn from ethnic groups or tribes that had been repressed during ‘Alimqul’s regime (or, in some cases, earlier). Kirghiz calvary were especially prone to desert, often abandoning the fight and leaving locals to fend off Russian forces or cut deals with them.²⁷ Group membership clearly facilitated desertion; whole units, rather

²⁵Estimates derived from multiple sources, including: Bababekov (2006*b*, 40-47), Terent’ev (1906, 280-320), Bobozhonov (2010, 260-69) and Serebrennikov (1914, 22,25,54,55,126,218-22,286-87).

²⁶Russians only had 1,951 soldiers in this battle.

²⁷“Zapiska o dieisgviyakh” vzvoda strielkovoï roty 7 Zapando-Sibirskago bataliona pri shturm” gor. Tashkenta 15,16, i 17 iyunya 1865g” and “Voennyi gubernator’ Turkestan. oblasti komandyiushchemy

than individual soldiers, organized and then pursued desertion collectively.

Even rare successes exposed the interethnic fragility of Khoqand's military. At the Battle of Ikan (December 1864), a small detachment of Cossacks was surprised and then overwhelmed by a much larger Khoqandian formation. Immediately after fighting ceased, Qipchak and Kirghiz units turned on each other, falling out over the spoils of the battle, including the clothes of dead Cossacks (Bobozhonov, 2010, 267-69). Exploited by 'Alimqul as a propaganda victory, the battle actually underscored the crippling identity-induced weaknesses of Khoqand's military even under the best of circumstances.

'Alimqul was aware of the possible threat desertion posed. In fact, after Russian forces easily captured Chimkent early in the war (September 1864), he issued an remarkable edict to his senior military commanders: avoid ill-advised offensives against Russian forces that might expose Khoqandian forces. Better, he reasoned, to stay mostly on the defensive, utilizing Khoqand's vast manpower advantage while reducing opportunities for desertion. "Let him [Mizra Ahmad Queshbegi, 'Alimqul's commander at Chimkent] henceforth not perpetrate such imprudent and foolish actions. Even if the Russian army approached Tashkent, were defeated, abandoned their artillery, canopies, tents and fled, let him not go out of the fortified walls to seize the spoils. It will be sufficient if he holds onto the Tashkent fortress" (Tashkandi, 2003, 68).

This injunction against offensives that might fracture the military internally was subsequently sent to other senior commanders. In effect, identity-induced constraints hamstrung Khoqand's military by removing its best chance at victory: disrupting Russia's long, vulnerable, supply lines with hit-and-run attacks.

Khoqand's defeat at Chimkent offers a microcosm of this noxious mix of regime fears of internal dissent, a fractured and possibly unreliable military, and General Cherniaev's ability to capitalize on these self-induced weaknesses.

'Alimqul, not expecting the Kirghiz to support Khoqand with any particular zeal, seized Chimkent's leading Kirghiz elders and upbraided them for their in-

voisk Orenb. kraya; 7 iulya 1865g No.2306," in Serebrennikov 1914, 218,248-51. See also Terent'ev 1906, 318-20.

difference to the Muslim cause and their apparent submission before the Russians. Threatening them with vengeance and punishment [if action was not forthcoming], he ordered the oldest Kirghiz elder to be strapped to a loaded cannon, in the English fashion, and then executed. . . The result, however, was totally unexpected by Khoqand: every Kirghiz, except the arrested beys and sultans, fled to Cherniaev, and despite the antiquated nature of their weapons, offered strong assurances that they would assist him (Terent'ev, 1906, 285).

Cherniaev accepted 1,000 of these petitioners, staffing his own Kirghiz militia. Exploiting these internal divisions had been a staple of Russian planning since at least the 1850s. As Cherniaev himself would write, the Chimkent massacre made it possible to “wrap ourselves in the clothes of Kirghiz liberators [who were] saving them from fanaticism.”²⁸ Khoqand's identity type was not endogenous to the Russian challenge; instead, these latent divisions facilitated Russia's advance by encouraging desertion and fifth columnists from repressed ethnic and tribal groups.

8.3 Morocco: Type0 Identity Type

Much like Khoqand, the theocratic Moroccan regime (the Makhzan) presided over a markedly heterogeneous population. Ethnic and tribal groupings, along with multiple Sufi orders, were present, potentially offering would-be challengers the normative raw material for challenging the Makhzan. Yet Morocco's rulers had, by the eve of the Hispano-Moroccan War, chosen a different path from Khoqand. Rather than exploit these competing claims in a rule-through-repression strategy, Morocco's leaders articulated an inclusionary “mosaic” vision of community. More specifically, in Bennison (2002, 161)'s phrase, the Makhzan crafted its “moral armory” from three shared precepts.

First, tracing its lineage back to Mohammad, the Alaouite ruling family cast its rule in terms of the Sultan's divine right. This religious sanctioning of the Sultan's rule was buttressed by a second precept: the promulgation of Sharia law as the basis for community membership. And, third, the regime embraced the notion that its ability to wage jihad

²⁸“Pis'ma nachalnika Zachuiskago otryada: 20 avgusta 1864” in Serebrennikov 1914, 114-116, quote on p.115.

against foreign invaders (and lawless bandits such as Mediterranean pirates) was the shared yardstick for measuring its legitimacy. In this communal vision, both the ruler and the ruled had a shared duty to protect Islam, creating a natural bond that transcended narrower group allegiance (Bennison, 2002, 159-62).

Unlike Khoqand, however, the Makhzan had also institutionalized a commitment to neutralizing group allegiances. A sophisticated system of interlocking patronage appointments within and across various groups helped secure support for the regime’s vision (Pennell, 2000, 37). Rather than entrench an ethnic hierarchy, only to see it overthrown bloodily with each new ruler, the Alaouite monarchy sought to stand above the potential fray by advocating a universal vision. To be sure, coercion was sometime applied toward restive tribes, though no large-scale state-directed violence occurred in the ten year window preceding 1859.²⁹ But most violence, when it occurred, was actually inter-group, not state-directed, as the Makhzan preferred jihad and jobs to violent repression.³⁰

Morocco’s military reflected its heterogeneous nature. The bulk of its forces were drawn from tribal levies (*ghish* and *nu’ai*); several tribes performed permanent service in exchange for land and tax exemptions. Slaves, too, were employed; these *bukhari* units were often staffed via automatic conscription of runaway slaves caught by state authorities. True to its composite nature, artillery units were manned by European “renegades” (*‘ulu*), mostly Spanish and French deserters from the French Army’s campaign at Isley in 1844 (Simou 1995, 122-24 and Srhir 2004; Rollman 2004; Bennison 2004; Ennaji 1999, 7).

Though it is tempting to dismiss Morocco’s defeat at Spanish hands as inevitable, the Makhzan was aware of European technological advances. Inspired by contemporary reformers in Tunisia, Egypt, and the Ottoman Empire, Morocco’s military believed that “there could be no victory without it [Western technology and techniques] against anyone who has it” (cited in Rollman 2004, 216fn31). It not only began adopting European drill

²⁹Morocco did conduct occasional campaigns against coastal Berbers, who were engaged in piracy of European shipping. These populations were *de facto* and *de jure* (by 1799 Treaty) outside of Morocco’s jurisdiction.

³⁰Slavery, though waning, was still present in Morocco in this era. Estimates range from one to four percent of the population was a (freed) slave, far below the 10 percent required for coding a Type2 combatant. See El Hamel 2013, 244-45 and Godard 1860, 221 and Malte-Brun 1835, 148-49.

and uniforms in 1845 but, like Khoqand, looked to the United Kingdom for training and technical assistance, especially for its artillery corps. The United Kingdom even established a permanent artillery base on Gibraltar to train Moroccan forces. Indeed, Spain would complain openly about British assistance to Morocco once the war began, though such efforts were too modest to affect war outcomes.³¹

8.4 The Absence of Desertion

The Hispano-Moroccan War consisted of four major battles (at Ceuta, Los Castillejos, Tetuan, and Wad Ras) and at least 23 smaller engagements during 1859-60. Morocco would ultimately lose the war, though not before its military had bloodied the Spanish expedition. The war was fought conventionally; trenches, fortifications, calvary charges, joint infantry and calvary offensives, and even naval support from Spanish ships were all present. Despite incurring greater losses over a shorter period than Khoqand, Morocco's military fought with higher morale, even zeal, and displayed far greater flexibility, even as it was riven by ethnic and tribal cleavages (del Rey, 2001; Griffiths, 1897; Hardman, 1860; de Alarcon, 1988).

Most importantly, there is no evidence suggesting mass desertion occurred. Existing records suggest only a handful of men ever deserted (de Alarcon, 1988, 441). Instead, reporting by journalists and the Spanish military itself is replete with references to the difficulty of the struggle, including Moroccan willingness to fight pitched battles and the tenacity of its forces in trying to retake lost territory. Unlike Cherniaev, General O'Donnell, who led Spain's war effort, shelved his plans to create a local auxiliary force given the absence of defectors (Hardman, 1860, 241). Moroccan forces also had sufficient cohesion to regroup repeatedly to confront Spanish squares directly while trying to envelope them from the flanks, actions often missing from Khoqandian offensives.³² "Each Moorish tent," wrote Pedro de Alarcón in his masterful *Diary of a Witness to the War in Africa*, "each flowering

³¹See, for example, "Spain and Morocco," *New York Times*, 2 January 1860.

³²See, for example, "Foreign and Colonial News," *Illustrated London News*, 17 December 1859; "Great Spanish Victory in Morocco," *New York Times*, 20 January 1860; "Foreign and Colonial News," *Illustrated London News*, 25 February 1860; and "The War in Morocco; Capture of Tetuan by the Spaniards," *New York Times*, 25 February 1860.

tree, each canebrake, each fence, presents a challenge, a personal dispute, a struggle hand to hand” (de Alarcon, 1988, 341).

Superior morale and discipline in turn allowed Moroccan forces to adopt more sophisticated tactics. Unlike Khoqand, Morocco’s military was able to wield multiple armies simultaneously at the same engagement. Moroccan forces were better able to use terrain for complex ambushes as well as cover and concealment, increasing both their survivability and lethality. Moroccan infantry also attacked at night (de Alarcon, 1988, 315), something not seen during Khoqand’s war with Russia, and withstood repeated charges by Spanish forces with fixed bayonets before retreating. Even the duration of the battles favored Morocco; Khoqand’s fortress at Aelie-Ault fell within two hours, while Spanish forces took over two days to defeat Morocco at Los Castillejos.

Compare, for example, Morocco’s stand at Tetuan—the battle that would lead Mohammed IV to sue for peace—and Khoqand’s desultory fighting at Tashkent:

They have fought well before, but it was hardly to be expected, under all the circumstances, that they should have fought the best at the last. When we remember that they had been invariably defeated during the four months’ campaign — often, as I believe, with less damage than their careful, deliberate fire inflicted on the victors, but on some other occasions, certainly, with very heavy loss — that they had not a single triumph to look back upon as a precedent for hope, nor a single gun to oppose to the Spanish artillery, which, with that prodigality of fire that distinguishes it, crushed them with shot, shell, and rockets; remembering all these things, I say, one must regard with admiration the fact that on Friday last they showed a dash and determination even greater than they ever before displayed (Hardman, 1860, 287).

This is not to suggest that Morocco’s military was a paragon of battlefield effectiveness. Critics, including Moroccan observers, noted Morocco’s antiquated technology, poor leadership, and outmoded tactics (al Salawi, 1917; Calderwood, 2012). Its considerable assets, including favorable force ratios and local knowledge of terrain, were often frittered away. “The Moorish generals are surely very stupid people,” one journalist noted. “They allow this [Spanish] army to pass unmolested. . . through defiles where they might attack it with certainty of causing it much loss, and of suffering little themselves; and three days later

they come and attack it in strong positions, when its forces are concentrated, its parapets made, its artillery at hand, and ready to act at five minutes' notice" (Hardman, 1860, 146).

On balance, however, the absence of mass desertion, coupled with greater battlefield flexibility, resulted in relatively higher military effectiveness for Morocco. The Makhzan's reliance on a communal Islamic vision and its avoidance of prior group-based violence or coercion removed tribal (and other) identities as potentially exploitable cleavages. It would be anachronistic to claim that soldiers were motivated by nationalism; group identities still remained important. Instead, soldier morale was driven by a belief that they were fighting for their faith and its representative. Similarly, appeals to jihad were sufficiently expansive, if not nebulous, to allow the regime to stake claim to a unifying vision. Unlike in Khoqand, where similar rhetoric was used, the Makhzan's appeals to shared values were viewed by soldiers as more credible given the absence of prior group-based marginalization or repression.

9 Desertion, Losses and Endogeneity Concerns

We might worry, however, that mass desertion is being driven by an omitted variable: battlefield losses. It is reasonable to assume, for example, that the probability of mass desertion increases as casualties shatter primary group bonds (Shils and Janowitz, 1948) and as skepticism about the prospects of victory set in.

Yet testing this claim is not straightforward. Whether we should measure *absolute* losses or *relative* ones is often unclear. Battlefield losses (however defined) could certainly drive mass desertion; but desertion (or the threat of its occurrence) could also be the reason behind poor loss-exchange ratios. Both mass desertion and battlefield losses could also be explained by the same independent variable and thus both influence military (in)effectiveness. And, in the end, crossnational data provide only a clumsy means for investigating a dynamic process that unfolds over time at the battle, not war, level.

Yet our crossnational data do offer some clues about the relationship between casualties and desertion. Three pieces of evidence are key. First, an easy test is simply to add a variable for loss-exchange ratios to Models 1-6; we should observe a negative relationship,

indicating that as State A becomes more proficient at killing enemy soldiers, the odds of State A's soldiers deserting decrease. This is indeed what we find, but only for the post-1917 era (Table 4 in SA), suggesting a more nuanced process is at work.

Second, mass desertion often happens at a war's early stages, well before the conflict has degenerated into an attritional slugfest. Nearly 25% of all incidences of mass desertion are recorded as occurring on the war's first day; 38% occurred only 10 days into the war; and a staggering two-thirds of mass desertion had occurred by ≤ 100 days. The stereotypical deserter who serves for months, even years, under brutal conditions before disillusionment finally drives him from the battlefield may be a comparative rarity.

Third, many of these soldiers and units were not deserting from the front lines. Instead, they were seeking opportunities to abandon the war from rear areas or, failing that, en route to the front. Railway terminals, clogged with the movement of soldiers to the front, were often associated with large-scale desertion, as witnessed by the Ottomans in World War One (Beşikçi, 2012). In many cases, these units had never experienced combat, challenging claims that direct exposure to (crushing) battlefield losses drives mass desertion.

In the absence of crossnational time-series data from individual battles, I use our matched cases to as an initial attempt to disentangle identity type, loss-exchange ratios, and desertion. Here, evidence suggests that mass desertion actually drove loss-exchange ratios, especially in Khoqand, and that mass desertion was not tied to specific battlefield defeats or casualties. Several points bear emphasizing.

Perhaps most importantly, Moroccan forces were actually taking higher losses than Khoqand until Tashkent's fall but did not desert. In fractional terms, Morocco lost about 11% of its fielded force; Khoqand, by contrast, had only lost about 7% until its army collapsed at Tashkent, driving its fractional loss to 17% of its total fielded force. Morocco did enjoy a far superior loss exchange ratio, losing only 2.3 soldiers for each Spanish soldier killed, while Khoqand lost a staggering 50 soldiers for each Russian killed. Yet these totals are inflated by the mass desertion and subsequent killing of at least 5,000 calvary at Tashkent. These calvary losses at Tashkent represent nearly 58% of total Khoqandian casualties, bloating Khoqand's already poor loss-exchange ratio. Rather than battlefield losses generating desertion, in this case we find the opposite: desertion creating opportunities for

an opponent to inflict heavy casualties on a disintegrating army.³³

Mass desertion in Khoqand's army also often preceded battle, worsening the odds of soldiers who remained committed. Qipchak and Kirghiz forces refused to join battle against Russian columns marching on two fortresses at Shur-Tipa that protected Tashkent's approaches. "This was the beginning of the internal destruction of Khoqand's army," B. Bobozhonov has argued, "in which clan and local interests took precedence over the necessity of joint action against a common opponent, despite ['Alimqul's] religious trappings" (Bobozhonov, 2010, 277).

Nor did mounting casualties cause 'Alimqul to lose faith in Khoqand's ability to defeat Russia.³⁴ In fact, after Khoqand's lone victory over Russian (Cossack) forces at Ikan in December 1864, 'Alimqul rejected efforts by his advisors to parlay this temporary momentum swing into a negotiated settlement. Instead, an emboldened 'Alimqul sent badly-needed forces to help an upstart leader, Yakub-Beg, with his (successful) campaign against Chinese forces at Kashgaria. At a time when Khoqand's only advantage lay in its preponderance of forces, 'Alimqul squandered his best asset (Kim, 2004; Bobozhonov, 2010, 270).

Though only two cases, Khoqand and Morocco raises questions about whether desertion is simply a function of casualties. If so, loss-exchange ratios suggest that Morocco, not Khoqand, would be more likely to experience desertion. Casualties clearly do matter, of course, but these cases illustrate the importance of disentangling at close range the sequence of desertion and battlefield losses. In some cases, it is possible that casualties are the outcome, not the cause, of mass desertion. Above all, a narrow focus on loss-exchange ratios can miss how preexisting cleavages condition not just the incidence of mass desertion but *who* deserts (and when).

³³At least one author (Nalivkine, 1889, 249) argues that the desertion of Khoqand's calvary played a direct role in the death of 'Alimqul himself by leaving his battlefield position exposed.

³⁴'Alimqul was not totally misguided. Cherniaev himself noted the close-run nature of some early battles, crediting his ability to defeat Khoqand's forces to exploitable cleavages within their ranks. See "Pis'mo Voennogo Gubernatora Turkestanskoi Oblasti General Maiora Chernyaeva Komanduiushchemy voisk Orenburgekovo krai: 7 iulya 1865," in Bababekov 2006*b*.

10 Conclusion

Drawing on the Project Mars dataset of combatants and conventional wars, I find a strong association between prewar identity type and wartime mass desertion. As military inequality increases, so too does the risk of mass desertion; the shift from a Type0 to a Type2 project is associated with the largest increase of risk in both pre-modern and modern eras. These results are robust to periodization, various model specifications, multiple robustness checks (including using only COW observations), and to a two-control group matched comparison. Close-range evidence of the causal process at work is provided using two combatants that share similar values on 29 covariates but where different identity types produce sharply divergent patterns of desertion. Regime type, material preponderance, and patterns of recruitment appear to have little association with mass desertion. To be sure, battlefield dynamics are important: casualties, poor logistics, local terrain, even weather conditions can all affect desertion. But a narrow microlevel can obscure broader structural forces that condition the likelihood of desertion even before the war begins.

These findings suggest natural extensions. Treating identity type as a variable creates several research opportunities, including exploring within-category variation and the dynamics of identity contestation once war begins. Mass desertion itself deserves wider investigation, including its timing and severity (as overall percentage of fielded forces). The decline of desertion across historical eras, which may arise from the destruction of Type2 combatants over time, is another trend worth examining. Perhaps most ambitiously, the task of scaling up from battlefield desertion to overall war outcomes remains incomplete. Can armies experience mass desertion and still win their wars, or does desertion represent a crippling weakness that few combatants can shrug off to defeat their adversaries?

The expanded notion of military effectiveness used here, with its emphasis on cohesion rather than loss-exchange ratios, could be extended to other issues of soldier behavior. We still know little about the sources of wartime defection, for example. Similarly, the use of violence against one's own soldiers, a relatively commonplace battlefield practice, has received almost no attention in our theories of warfare. When combatants resort to these units, how they staff them, and whether they are actually effective at deterring desertion

or defection remain open questions.

Methodologically, the use of matching as a bridge between crossnational and microlevel approaches can be extended to other empirical domains beyond conventional war. Using matching to guide case selection has several clear advantages, including transparency and replicability. It also facilitates causal identification by screening out rival explanations at the design stage, making detailed process-tracing more feasible. And the matched cases are especially useful for capturing sequencing and dynamics at close-range for especially complicated relationships—in this case, between casualties and desertion—that are difficult, if not impossible, to capture with crossnational data.

Finally, we should not lose sight of the policy relevance of mass desertion. The Iraqi Army's sudden collapse in the face of ISIS's June 2014 advance underscores the consequences desertion can have for military effectiveness. The more muted, but no less significant, trickle of deserters from the Afghan National Army—estimated to be at 3% a month (Department of Defense, 2014, 64-65)—also highlights the difficulty of (re)constructing cohesive fighting forces, especially by external powers. More generally, these cases suggest the need to include measures of military cohesion in net assessments of a combatant's (potential) capabilities. Understanding a combatant's prewar cleavages, and the regime's possible use of these to legitimate its rule, would help avoid surprises about a military's battlefield cohesion and the effectiveness of training programs. Above all, however, these findings suggest that reforming the military may be insufficient, and ultimately unsuccessful, if regimes continue to view national security as a private rather than public good. Only by tackling the prewar sources of military inequality can militaries avoid battlefield desertion and, quite possibly, defeat as well.

References

- al Salawi, Ahmad ibn Khalid. 1917. *Versión Árabe de la Guerra de África (Años 1859-1860)*. Madrid: Biblioteca Hispano-Marroquí. Translated by Clemente Cerdeira.
- Alesina, Alberto and Elina LaFerrara. 2005. "Ethnic Diversity and Economic Performance." *Journal of Economic Literature* 63:762–800.
- Alesina, Alberto, Reza Baqir and William Easterly. 1999. "Public Goods and Ethnic Divisions." *Quarterly Journal of Economics* 114:1243–84.
- Ardant du Picq, Charles. 1904. *Études sur le combat: combat antique et combat moderne*. Paris: R. Chapelot.
- Bababekov, Khaidarbek. 2006a. *Isotoriia Kokanda*. Tashkent: Institut istorii narodov srednei azii imeni Makhpirat.
- Bababekov, Khaidarbek. 2006b. *Isotoriia zavoevaniia Srendei Azii tsarskoi Rossiei v sekretnykh dokumentakh*. Tashkent: Institut istorii narodov srednei azii imeni Makhpirat.
- Baynes, John. 1969. *Morale: A Study of Men and Courage*. London: Cassell.
- Beckley, Michael. 2010. "Economic Development and Military Effectiveness." *Journal of Strategic Studies* 33:43–79.
- Beşikçi, Mehmet. 2012. *The Ottoman Mobilization of Manpower in the First World War: Between Volunteerism and Resistance*. Boston: Leiden.
- Beisembiev, Timur. 2008. *Annotated Indices to the Kokand Chronicles*. ILCAA: Research Institute for Languages and Cultures of Asia and Africa.
- Bennison, Amira. 2002. *Jihad and its Interpretations in Pre-Colonial Morocco*. New York: RoutledgeCurzon.
- Bennison, Amira. 2004. "The "New Order" and Islamic Order: The Introduction of the Nizami Army in the Western Maghrib and Its Legitimation, 1830-73." *International Journal of Middle East Studies* 36:399–420.
- Biddle, Stephen. 2004. *Military Power: Explaining Victory and Defeat in Modern Battle*. Princeton: Princeton University Press.
- Biddle, Stephen and Stephen Long. 2004. "Democracy and Military Effectiveness: A Deeper Look." *Journal of Conflict Resolution* 48(4):525–46.

- Bobozhonov, B. 2010. *Kokandskoe khanstvo: vlast', politika, religia*. Tashkent: Institut Vostokovedeniya akademii nauk Respubliki Uzbekistan.
- Brandenburger, David. 2002. *National Bolshevism: Stalinist Mass Culture and the Formation of Modern Russian National Identity, 1931-1956*. Harvard: Harvard University Press.
- Brandenburger, David. 2011. *Propaganda State in Crisis: Soviet Ideology, Indoctrination, and Terror Under Stalin, 1927-1941*. Palo Alto: Stanford University Press.
- Brass, Paul. 2003. *The Production of Hindu-Muslim Violence in Contemporary India*. Seattle: University of Washington Press.
- Brooks, Risa and Elisabeth Stanley, eds. 2007. *Creating Military Power: The Sources of Military Effectiveness*. Stanford: Stanford University Press.
- Broxup, Marie. 1983. "The Basmachi." *Central Asian Survey* 2(1):57–81.
- Burke, S.M., ed. 2000. *Jinnah: Speeches and Statements, 1947-1948*. Oxford: Oxford University Press.
- Calderwood, Eric. 2012. "The Beginning (or End) of Moroccan History: Historiography, Translation, and Modernity in Ahmad B. Khalid's Al-Nasiri and Clemente Cerdeira." *International Journal of Middle East Studies* 44:399–420.
- Canetti, Daphna and Miriam Lindner. 2014. Exposure to Political Violence and Political Behavior. In *Psychology of Change: Life Contexts, Experiences, and Identities*, ed. Katherine Reynolds and Nyla Branscombe. New York: Psychology Press pp. 77–94.
- Castillo, Jasen. 2014. *Endurance and War: The National Sources of Military Cohesion*. Palo Alto, CA: Stanford University Press.
- Christia, Fotini. 2012. *Alliance Formation in Civil War*. Cambridge: Cambridge University Press.
- Cohen, Stephen. 1998. *Pakistan Army*. Berkeley: University of California Press.
- Conquest, Robert. 1986. *The Harvest of Sorrow: Soviet Collectization and the Terror-Famine*. Oxford: Oxford University Press.
- Correlates of War. 2010. *Inter-State War Data: Version 4.0*.
URL: <http://www.correlatesofwar.org/>

- Costa, Dora and Matthew Kahn. 2008. *Heroes and Cowards: The Social Face of War*. Princeton: Princeton University Press.
- Daines, Vladimir. 2008. *Shtrafbaty i zagradostryady Krasnoi Armii*. Moskva: Yauza.
- Danilov, V.P., R.T. Manning and L. Viola, eds. 2006. *Tragediia sovetskoi derevni: Kollektivizatsiia i raskulachivanie, 1927–1939*. Vol. 5 Moskva: ROSSPEN.
- de Alarcon, Pedro Antonio. 1988. *Diary of a Witness to the War in Africa*. Memphis: White Rose Press. Translated by Bern Keating.
- del Rey, Miguel. 2001. *La Guerra de África, 1859-1860*. Madrid: Grupo Medusa Ediciones.
- Department of Defense. 2014. *Report on Progress Toward Security and Stability in Afghanistan*. Washington, D.C.: Department of Defense.
- Desch, Michael. 2008. *Power and Military Effectiveness: The Fallacy of Democratic Triumphalism*. Baltimore: Johns Hopkins University Press.
- Downes, Alexander. 2009. “How Smart and Tough Are Democracies? Reassessing Theories of Democratic Victory in War.” *International Security* 33:9–51.
- Dubovitskii, Victor and Khaydarbek Bababekov. 2011. The Rise and Fall of the Kokand Khanate. In *Ferghana Valley: The Heart of Central Asia*, ed. Frederick Starr. Armonk, NY: M.E. Sharpe pp. 29–68.
- Dupuy, Trevor. 1979. *Numbers, Predictions, and War: Using History to Evaluate Combat Factors and Predict the Outcomes of Battles*. New York: The Bobbs-Merrill Company, Inc.
- El Hamel, Chouki. 2013. *Black Morocco: A History of Slavery, Race, and Islam*. Cambridge: Cambridge University Press.
- Ennaji, Mohammed. 1999. *Serving the Master: Slavery and Society in Nineteenth-Century Morocco*. New York: St. Martin’s Press. Translated by Seth Graebner.
- Fazal, Tanisha. 2007. *State Death: The Politics and Geography of Conquest, Occupation, and Annexation*. Princeton: Princeton University Press.
- Fearon, James and David Laitin. 1996. “Explaining Interethnic Cooperation.” *American Political Science Review* 90(4):715–35.

- Fennell, Jonathan. 2011. *Combat and Morale in the North African Campaign: The Eighth Army and the Path to El Alamein*. Cambridge: Cambridge University Press.
- Fletcher, Joseph. 1978. The Heyday of the Ch'ing Order in Mongolia, Sinkiang, and Tibet. In *The Cambridge History of China*, ed. John Fairbank. Vol. 10 Cambridge: Cambridge University Press pp. 351–408.
- Forrest, Alan. 1989. *Conscripts and Deserters: The Army and French Society During the Revolution and Empire*. New York: Oxford University Press.
- Freedman, Lawrence. 2005. “A Theory of Battle or a Theory of War?” *Journal of Strategic Studies* 3:425–435.
- Gapurov, Sh.A., A.M. Izrailov and R.A. Tovsultanov. 2007. *Chechnya na zaver-shaiushchem etape Kavkazskoi voiny: stranitsy khroniki russko-gorskoi tragedii XIX veka*. Nal'chik: El'-Fa.
- Godard, Léon. 1860. *Description et histoire du Maroc: comprenant la géographie et la statistique de ce pays d'après les renseignements les plus récents et le tableau de règne des souverains qui l'ont gouverné depuis les temps les plus anciens jusque'à la paix de Tétouan en 1860*. Paris: Ch. Tanera. Volume I.
- Griffiths, Arthur. 1897. Spanish Battles in Morocco, 1859-60: Castillejos, Tetuan, Guad el Ras. In *Battles of the Nineteenth Century*, ed. Archibald Forbes, G.A Henty and Arthur Griffiths. Vol. II London: Cassell and Company, Limited pp. 105–115.
- Gusterin, Pavel. 2014. *Istoriia Ibragim-beka. Basmachestvo odnogo kubashi s ero slov*. Saarbrücken: Lambert Academic Publishing.
- Hamed, Mohammad. 2010. “A Glance at Persian, European, and Russian Historical Sources on the Manghit Dynasty in the 19th Century.” *Review of Middle East Studies* 44:33–47.
- Hamner, Christopher. 2011. *Enduring Battle: American Soldiers in Three Wars, 1776-1945*. Lawrence: Kansas University Press.
- Hanmer, Michael and Kerem Ozan Kalkan. 2013. “Behind the Curve: Clarifying the Best Approach to Calculating Predicted Probabilities and Marginal Effects from Limited Dependent Variable Models.” *American Journal of Political Science* 57:263–277.
- Hardman, Frederick. 1860. *The Spanish Campaign in Morocco*. Edinburgh and London: William Blackwood and Sons.

- Harris, James, ed. 2013. *The Anatomy of Terror: Political Violence Under Stalin*. Oxford: Oxford University Press.
- Hechter, Michael. 2000. *Containing Nationalism*. Oxford: Oxford University Press.
- Hechter, Michael. 2013. *Alien Rule*. Cambridge: Cambridge University Press.
- Henderson, William. 1985. *Cohesion: The Human Element in Combat*. Washington, D.C.: National Defense University Press.
- Hopkins, B. D. 2008. "Race, Sex and Slavery: 'Forced Labour' in Central Asia and Afghanistan in the Early 19th Century." *Modern Asian Studies* 42(4):pp. 629–671.
- Horowitz, Michael, Erin Simpson and Allan Stam. 2011. "Domestic Institutions and Wartime Casualties." *International Studies Quarterly* 4:909–936.
- Huntington, Samuel. 1957. *The Soldier and the State*. Cambridge: Harvard University Press.
- Iacus, Stefano, Gary King and Giuseppe Porro. 2012. "Causal Inference without Balance Checking: Coarsened Exact Matching." *Political Analysis* 20:1–24.
- Jagers, Keith and Ted Robert Gurr. 2004. *Polity IV: Regime Change and Political Authority, 1800-2004*. Ann Arbor, MI: Inter-University Consortium for Political and Social Research.
- Jalal, Ayesha. 1990. *The State of Martial Rule: The Origins of Pakistan's Political Economy of Defense*. Cambridge: Cambridge University Press.
- Jalal, Ayesha. 1995. "Conjuring Pakistan: History as Official Imagining." *International Journal of Middle East Studies* 27:73–89.
- Kalyvas, Stathis. 2006. *The Logic of Violence in Civil War*. Cambridge: Cambridge University Press.
- Kalyvas, Stathis. 2008. "Ethnic Defection in Civil Wars." *Comparative Political Studies* 41:1043–1068.
- Keegan, John. 1976. *The Face of Battle*. New York: Viking.
- Kim, Hodong. 2004. *Holy War in China: The Muslim Rebellion and State in Chinese Central Asia, 1864-1877*. Stanford: Stanford University Press.

- King, Gary, Michael Tomz and Jason Wittenberg. 2000. "Making the Most of Statistical Analysis: Improving Interpretation and Presentation." *American Journal of Political Science* 44:341–55.
- Levi, Margaret. 1997. *Consent, Dissent, and Patriotism*. Cambridge: Cambridge University Press.
- Lyall, Jason. 2010. "Do Democracies Make Inferior Counterinsurgents? Reassessing Democracy's Impact on War Outcomes and Duration." *International Organization* 64:167–92.
- Lyall, Jason. 2015a. "Paths of Ruin: Explaining Battlefield Performance in Modern War." Book Manuscript.
- Lyall, Jason. 2015b. Process-Tracing, Causal Inference, and Civil War. In *Process Tracing in the Social Sciences: From Metaphor to Analytic Tool*, ed. Andrew Bennett and Jeffrey Checkel. Cambridge: Cambridge University Press.
- Lyall, Jason. 2016. "Forced to Fight: Coercion, Blocking Detachments, and Tradeoffs in Military Effectiveness."
- Lyall, Jason and Isaiah Wilson. 2009. "Rage Against the Machines: Explaining Outcomes in Counterinsurgency War." *International Organization* 63:67–106.
- Lynn, John. 1984. *The Bayonets of the Republic: Motivation and Tactics in the Army of Revolutionary France*. Urbana and Chicago: University of Illinois Press.
- MacKenzie, David. 1974. *The Lion of Tashkent: The Career of General M.G. Cherniaev*. Athens: University of Georgia Press.
- Malte-Brun, Conrad. 1835. *Précis de la géographie universelle*. Brussels: Th. Lejeune.
- Manz, Beatrice. 1987. "Central Asian Uprisings in the Nineteenth Century: Ferghana under the Russians." *The Russian Review* 46:267–281.
- Marshall, S.L.A. 1947. *Men Against Fire: The Problem of Battle Command in Future War*. New York: William Morrow.
- Martin-Màrquez. 2008. *Disorientations: Spanish Colonialism in Africa and the Performance of Identity*. New Haven, CT: Yale University Press.
- Martin, Terry. 2001. *The Affirmative Action Empire: Nations and Nationalism in the Soviet Union, 1923-1939*. Ithaca: Cornell University Press.

- McLauchlin, Theodore. 2010. "Loyalty Strategies and Military Defection in Rebellion." *Comparative Politics* 42:333–350.
- McLauchlin, Theodore. 2014. "Desertion, Terrain, and Control of the Home Front in Civil Wars." *Journal of Conflict Resolution* .
- McLauchlin, Theodore. 2015. "Desertion and Collective Action in Civil Wars." *International Studies Quarterly* 59:669–679.
- McPherson, James. 1994. *What They Fought For, 1861-1865*. Baton Rouge, LA: Louisiana State University Press.
- McPherson, James. 1997. *For Cause and Comrades: Why Men Fought in the Civil War*. New York: Oxford University Press.
- Miguel, Edward and Mary Kay Gugerty. 2005. "Ethnic Diversity, Social Sanctions, and Public Goods in Kenya." *Journal of Public Economics* 89:2325–68.
- Mody, Cissoko Sékéné. 1988. *Le Khasso face à l'empire toucouleur et à la France dans le Haut-Sénégal, 1854-1890*. Paris: Éditions L'Harmattan.
- Morrison, Alexander. 2014. "Introduction: Killing the Cotton Canard and getting rid of the Great Game: rewriting the Russian conquest of Central Asia, 1814-1895." *Central Asian Survey* 33:131–142.
- Moskos, Charles. 1975. "The American Combat Soldier in Vietnam." *Journal of Social Issues* 31(4):25–37.
- Naimark, Norman. 2010. *Stalin's Genocides*. Princeton, NJ: Princeton University Press.
- Nalivkine, V.P. 1889. *Histoire du khanat de Khokand*. Paris: Ernest Leroux. Translated by Aug. Dozon.
- Newby, L.J. 2005. *The Empire and the Khanate: A Political History of Qing Relations with Khoqand c. 1760-1860*. Leiden: Brill.
- Nielsen, Richard. 2014. "Case Selection via Matching." *Sociological Methods and Research* pp. 1–29.
- Olcott, Martha Brill. 1981. "The Basmachi or Freeman's Revolt in Turkestan, 1918-1924." *Soviet Studies* 33(3):352–69.

- Olikov, S. 1926. *Desertirstvo v Krasnoi Armii i bor'ba s nim*. Moskva: Izdanie Voennoi Tipografii Upravleniya Delami Narkomvoenmor i RVS SSSR.
- Pedroncini, Guy. 1983. *Les Mutineries de 1917*. Paris: Presse Universitaires de France. Second Edition.
- Pennell, C.R. 2000. *Morocco since 1830*. New York: New York University Press.
- Pilster, Ulrich and Tobias Böhmelt. 2011. "Coups-Proofing and Military Effectiveness in Interstate Wars, 1967-99." *Conflict Management and Peace Science* 28:331–350.
- Pilster, Ulrich and Tobias Böhmelt. 2012. "Do Democracies Engage in Less Coups-Proofing? On the Relationship Between Regime Type and Civil-Military Relations." *Foreign Policy Analysis* 8:1–17.
- Pirzada, Syed, ed. 1970. *Foundations of Pakistan: All-India Muslim League Documents, 1906-1947*. Three Volumes. Karachi: National Publishing House, Ltd.
- Posen, Barry. 1993. "Nationalism, the Mass Army, and Military Power." *International Security* 18:80–124.
- Posner, Daniel. 2004. "The Political Salience of Cultural Difference." *American Political Science Review* 98(4):529–46.
- Posner, Daniel. 2005. *Institutions and Ethnic Politics in Africa*. Cambridge: Cambridge University Press.
- Quinlivan, J.T. 1999. "Coups-Proofing: Its Practice and Consequence in the Middle East." *International Security* 24:131–65.
- Rahman, Tariq. 1996. *Language and Politics in Pakistan*. Oxford: Oxford University Press.
- Reese, Roger. 2011. *Why Stalin's Soldiers Fought: The Red Army's Military Effectiveness in World War II*. Lawrence, KS: University Press of Kansas.
- Reiter, Dan. 2007. Nationalism and Military Effectiveness: Post-Meiji Japan. In *Creating Military Power: The Sources of Military Effectiveness*, ed. Risa Brooks and Elizabeth Stanley. Stanford: Stanford University Press pp. 27–54.
- Reiter, Dan. 2009. *How Wars End*. Princeton: Princeton University Press.

- Reiter, Dan and Allan Stam. 1998. "Democracy and Battlefield Effectiveness." *Journal of Conflict Resolution* 42(3):259–77.
- Reiter, Dan and Allan Stam. 2002. *Democracies at War*. Princeton: Princeton University Press.
- Reiter, Dan and Allan Stam. 2003. "Identifying the Culprit: Democracy, Dictatorship, and Dispute Initiation." *American Political Science Review* 97:333–37.
- Rollman, Wilfred. 2004. "Military Officers and the Nizam al-Gadid in Morocco, 1844-1912." *Oriente Moderno* 23:205–225.
- Rosen, Stephen. 2005. *War and Human Nature*. Princeton: Princeton University Press.
- Rosenbaum, Paul. 2010. *Design of Observational Studies*. New York: Springer.
- Sanborn, Joshua. 2003. *Drafting the Russian Nation: Military Conscription, Total War, and Mass Politics, 1905-1925*. DeKalb, Illinois: Northern Illinois University Press.
- Sanin, Francisco Gutierrez and Elisabeth Wood. 2014. "Ideology in civil war: Instrumental Adoption and beyond." *Journal of Peace Research* 51:213–226.
- Serebrennikov, A.G. 1914. *Turkestanskii krai: Sbornik materialov dlya istorii ego zavoevaniya*. Tashkent: Izdanie shtaba Turkestanskogo voennago okruga. Volumes 17-21.
- Shils, Edward and Morris Janowitz. 1948. "Cohesion and Disintegration in the Wehrmacht in World War II." *Public Opinion Quarterly* 12:280–315.
- Simou, Bahija. 1995. *Les Reformes Militaires au Maroc de 1844 à 1912*. Rabat: Publications de la Faculté des Lettres et des Sciences Humaines.
- Singer, J. David and Melvin Small. 1966. "The Composition and Status Ordering of the International System, 1815-1940." *World Politics* 2:236–282.
- Snyder, Timothy. 2010. *Bloodlands: Europe Between Hitler and Stalin*. New York: Basic Books.
- Srhir, Khalid. 2004. "Britain and Military Reforms in Morocco During the Second Half of the Nineteenth Century." *Oriente Moderno* 23:85–109.
- Stam, Allan. 1996. *Win, Lose, or Draw: Domestic Politics and the Crucible of War*. Ann Arbor: University of Michigan Press.

- Stewart, Nora Kinzer. 1991. *Mates and Muchachos: Unit Cohesion in the Falklands/Malvinas War*. Washington, D.C.: Brassey's, Inc.
- Stouffer, Samuel, Edward Suchman, Leland DeVinney, Shirley Star and Robin Williams Jr. 1949. *The American Soldier: Adjustment during Army Life*. Princeton, NJ: Princeton University Press.
- Strachan, Hew. 2006. "Training, Morale, and Modern War." *Journal of Contemporary History* 41:211–227.
- Strauss, Scott. 2015. *Making and Unmaking Nations: War, Leadership, and Genocide in Modern Africa*. Ithaca: Cornell University Press.
- Talbot, Ian. 1998. *Pakistan: A Modern History*. London: Hurst and Company.
- Talmadge, Caitlin. 2013. "The Puzzle of Personalist Performance: Iraqi Battlefield Effectiveness in the Iran-Iraq War." *Security Studies* 22:180–221.
- Talmadge, Caitlin. 2015. *The Dictator's Army: Battlefield Effectiveness in Authoritarian Regimes*. Ithaca: Cornell University Press.
- Tashkandi, Mulla Muhammad Yunus Djan Shighavul Dadkhah. 2003. *Life of 'Alimqul: A Native Chronicle of Nineteenth Century Asia*. RoutledgeCurzon: New York. Edited and translated by Timur Beisembiev.
- Terent'ev, M. A. 1906. *Istoriia zavoevaniia Srednei Azii: s kartami i planami*. St Petersburg: V.V. Komarov. Volume I.
- Tomz, Michael, Jason Wittenberg and Gary King. 2003. "Clarify: Software for Interpreting and Presenting Statistical Results."
URL: <http://gking.harvard.edu/clarify>
- von Crevel, Martin. 1982. *Fighting Power: German and U.S. Army Performance, 1939-1945*. New York: Praeger.
- Wallace, Geoffrey. 2012. "Welcome Guests, or Inescapable Victims? The Causes of Prisoner Abuse." *Journal of Conflict Resolution* 56:955–981.
- War Inquiry Commission. 2000. *The Report of the Hamoodur Rehman Commission into the 1971 War (As Declassified by the Government of Pakistan)*. Lahore: Vanguard.
- Watson, Alexander. 2008. *Enduring the Great War: Combat, Morale, and Collapse in the German and British Armies, 1914-1918*. Cambridge: Cambridge University Press.

- Watson, Bruce. 1997. *When Soldiers Quit: Studies in Military Disintegration*. Westport, CT: Praeger.
- Weeks, Jessica. 2014. *Dictators in War and Peace*. Ithaca: Cornell University Press.
- Weinsten, Jeremy. 2007. *Inside Rebellion: The Politics of Insurgent Violence*. Cambridge: Cambridge University Press.
- Weitz, Mark. 2005. *More Damning than Slaughter: Desertion in the Confederate Army*. Lincoln: University of Nebraska Press.
- Weller, Nicholas and Jeb Barnes. 2014. *Finding Pathways: Mixed-Method Research for Studying Causal Mechanisms*. Cambridge: Cambridge University Press.
- Wimmer, Andreas. 2013. *Waves of War: Nationalism, State Formation, and Ethnic Exclusion in the Modern World*. Cambridge: Cambridge University Press.
- Woldemariam, Michael. 2014. "Battlefield Outcomes and Rebel Cohesion: Lessons from the Eritrean Independence War." *Terrorism and Political Violence* .
- Wood, Elizabeth. 2003. *Insurgent Collective Action and Civil War in El Salvador*. Cambridge: Cambridge University Press.

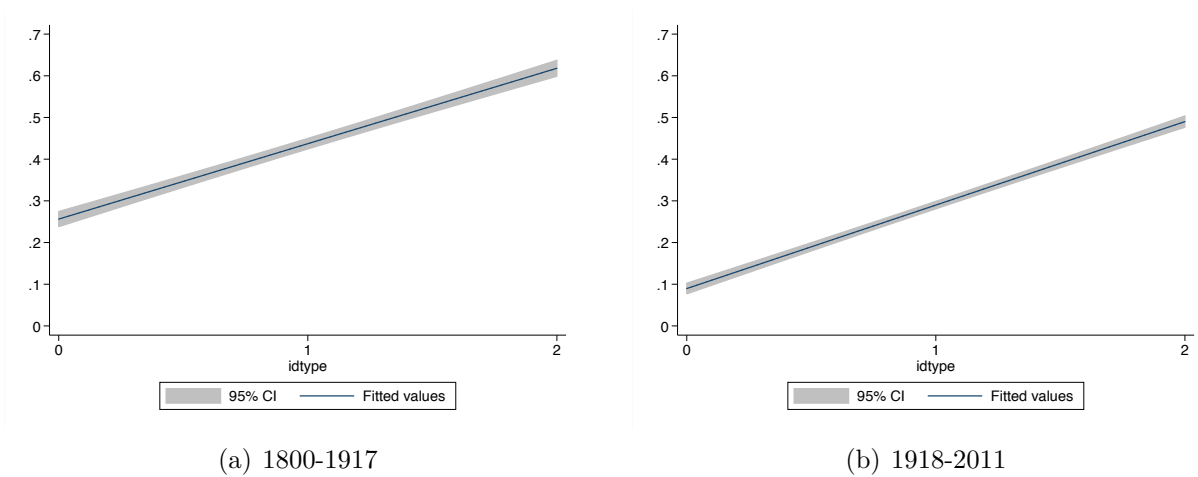


Figure 1: Predicted Likelihood of Desertion, by Identity Type and Time Period

Note: Estimates derived from Models 3 and 6 with 95% confidence interval.

Table 1: Identity Type and Desertion, By Era

Variables	<i>Pre-Modern</i> (1800-1917)			<i>Modern</i> (1918-2011)		
	Model 1 (ALONE)	Model 2 (REDUCED)	Model 3 (ALL)	Model 4 (ALONE)	Model 5 (REDUCED)	Model 6 (ALL)
ID TYPE	0.739*** (0.131)	0.707*** (0.129)	0.825*** (0.169)	0.992*** (0.235)	1.208*** (0.228)	1.217*** (0.234)
REGIME		-0.002 (0.029)	-0.015 (0.029)		0.050 [†] (0.028)	0.069* (0.029)
INITIATOR		0.014 (0.307)	0.118 (0.334)		-0.036 (0.426)	0.045 (0.441)
REGIME × INITIATOR		0.019 (0.032)	0.025 (0.034)		-0.023 (0.034)	-0.025 (0.034)
OPPDemo		0.212 (0.333)	0.240 (0.349)		-0.665 [†] (0.349)	-0.506 (0.353)
REL POWER		0.366 (0.485)	0.395 (0.575)		0.481 (0.739)	0.822 (0.762)
GREAT POWER		-0.187 (0.263)	-0.022 (0.382)		-0.883 [†] (0.482)	-0.483 (0.565)
JOINER			0.460 (0.434)			-0.990 (0.753)
VOLUNTEER			-0.139 (0.259)			-0.250 (0.367)
COMPOSITE			0.256 (0.320)			0.365 (0.262)
STANDING			0.152 (0.451)			-0.074 (0.479)
DISTANCE			-0.186* (0.089)			-0.031 (0.069)
DURATION			0.362*** (0.071)			0.304*** (0.085)
CIVIL WAR			1.179*** (0.306)			0.350 (0.283)
NON-COW			-0.890* (0.456)			0.070 (0.457)
<i>Constant</i>	-1.111*** (0.142)	-1.280*** (0.405)	-2.540*** (0.733)	-2.092*** (0.355)	-2.591*** (0.633)	-4.699*** (1.004)
N	483	483	483	342	342	342
Clusters	137	137	137	124	124	124
Wald χ^2	31.83***	35.41***	83.56***	17.78***	33.00***	71.27***
Loglikelihood	-297.54	-296.15	-263.31	-184.72	-175.18	-162.74
r^2	0.08	0.09	0.19	0.11	0.16	0.22

Note: Robust standard errors clustered on combatant. [†]Significant at 10%
 *Significant at 5% **Significant at 1% ***Significant at .01%.

Table 2: Two-Control Group Comparison Using Coarsened Exact Matching (CEM)

Comparison	Pre-Modern (1800-1917)			Modern (1918-2011)		
	Model 7 (ALONE)	Model 8 (REDUCED)	Model 9 (ALL)	Model 10 (ALONE)	Model 11 (REDUCED)	Model 12 (ALL)
Low Military Inequality High Military Inequality						
ID TYPE	1.180*** (0.301)	1.271*** (0.299)	1.411*** (0.485)	2.394*** (0.433)	2.757*** (0.488)	2.793*** (0.652)
Constant	-0.866*** (0.243)	-1.386*** (0.363)	-0.946 (0.985)	-2.151*** (0.369)	-2.274*** (0.739)	-4.517*** (1.321)
N	380	380	238	191	191	139
Cluster	132	132	81	92	92	65
Wald χ^2	15.39***	24.84***	992.53***	29.15***	277.08***	28.46***
Loglikelihood	-244.47	-237.46	-129.712	-104.132	-95.707	-70.989
r^2	0.06	0.09	0.20	0.17	0.24	0.21

Low + Medium Military Inequality High Military Inequality						
ID TYPE	1.025*** (0.282)	1.042*** (0.292)	1.337*** (0.442)	2.280*** (0.374)	2.745*** (0.386)	2.687*** (0.485)
Constant	-0.724*** (0.232)	-1.336*** (0.363)	-1.000 (0.993)	-2.082*** (0.272)	-1.937*** (0.615)	-2.909*** (1.071)
N	421	421	273	250	250	192
Clusters	132	132	86	112	112	84
Wald χ^2	13.21***	18.76**	878.72***	37.10***	64.58***	37.95***
Loglikelihood	-272.38	-267.44	-149.57	-129.81	-117.59	-91.575
r^2	0.04	0.06	0.20	0.19	0.27	0.23

Note: CEM with robust standard errors clustered on combatant. Models from Table 1. [†]Significant at 10% *Significant at 5% **Significant at 1% ***Significant at .01%.

Table 3: Matched Pair: The Khanate of Khoqand and the Sultanate of Morocco Compared

Covariates	Khanate of Khoqand <i>Khoqand-Russian War, 1864-65</i>	Sultanate of Morocco <i>Hispano-Moroccan War, 1859-60</i>
ID TYPE	Type2	Type0
<i>From Matching</i>		
WAR YEAR	1864	1859
INITIAL RELATIVE POWER	66%	66%
TOTAL FIELDIED FORCE	50,000	55,000
REGIME TYPE	-7	-6
DISTANCE FROM CAPITAL	265km	208km
STANDING MILITARY	Yes	Yes
COMPOSITE MILITARY	Yes	Yes
INITIATOR	No	No
JOINER	No	No
DEMOCRATIC OPPONENT	No	No
GREAT POWER	No	No
CIVIL WAR	No	No
<i>Contextual Covariates</i>		
COMBINED ARMS	Yes	Yes
DOCTRINE	Offensive	Offensive
FORTIFICATIONS	Yes	Yes
SUPERIOR WEAPONS?	No	No
FOREIGN ADVISORS	Yes	Yes
TERRAIN	Broad open plains (Ferghana Valley)	Broad coastal plain (Ceuta Enclave)
WAR DURATION	378 days	126 days
WARBIRTH	No	No
PRIOR WAR HISTORY W/OPPONENT	Yes	Yes
PRIOR HISTORY W/OTHER POWERS	Yes (China)	Yes (France)
FACING COLONIZER	Yes	Yes
IDENTITY DIMENSION	Sunni Islam/Christian	Sunni Islam/Christian
DECLARED JIHAD	Yes	Yes
NEW LEADER	Yes	Yes
POPULATION	5-6 million	8-8.5 million
ELF	High	High
CIV-MIL RELATIONS	Ruler as commander	Ruler as commander
MASS DESERTION	59 Yes	No