It's a Crime, but Is It a Blunder? The Efficacy of Targeting Civilians in War

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Abstract

Is systematically targeting an adversary's civilians in war an effective military strategy? This paper assesses the impact of civilian victimization on interstate war outcomes from 1816 to 2003. We begin by disaggregating civilian victimization into two distinct types: coercive victimization—in which a belligerent targets an adversary's civilians to persuade their government to surrender—and eliminationist victimization—where a belligerent removes members of a target group from a certain piece of territory. We find that the efficacy of both types of victimization is contingent on the regime type of the adversary. Coercive targeting is effective when used against anocracies, whereas eliminationist victimization is effective against all types of nondemocracies. We also find that eliminationist targeting is effective against small states but that its overall efficacy has declined over time. Brief case studies of the Siege of Paris in the Franco-Prussian War (1870-71) and British counterinsurgency strategy in the Second Anglo-Boer War (1899-1902) illustrate our findings.

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It is often argued that targeting civilians in war is—to quote Talleyrand—worse than a crime, it's a blunder. According to this view, strategies that seek victory (or some other objective, such as control over territory) by killing noncombatants are not only immoral and contrary to long-standing international norms and international humanitarian law, they consistently fail to provide the coercer with much leverage over the opponent. Leading studies of strategic bombing, naval blockade, and economic sanctions have found that these strategies rarely succeed (Pape 1996; Horowitz and Reiter 2001; Olson 1963; Hufbauer, Schott, and Elliott 1990; Pape 1997). The literature on insurgency has long maintained that indiscriminate violence in particular is counterproductive, generating desires for revenge among the victimized and prompting people to join insurgencies to protect themselves from state violence (Cooper 1979; Kalyvas 1999, 2004, 2006; Kocher, Pepinsky, and Kalyvas 2008). Recent studies of terrorism reach a similar conclusion, finding that when terrorists target civilians (as opposed to hitting military forces), they rarely achieve their goals (Abrahms 2006).

Yet this view is not unanimous. Much of the recent literature on the causes of civilian victimization suggests that war participants implement these strategies because they believe that targeting civilians can help them accomplish their objectives (Kalyvas 1999, 2004, 2006; Valentino 2004; Valentino, Huth, and Balch-Lindsay 2004; Valentino, Huth, and Croco 2006; Downes 2008). There has been no shortage of military and political leaders historically who have expressed this view, from the nineteenth century generals William T. Sherman and Helmuth von Moltke, to early twentieth century airpower theorists like Giulio Douhet and Hugh Trenchard, to great democratic statesmen like Franklin D. Roosevelt and Winston Churchill. Some scholars have argued that—at least when combating insurgencies—it pays to be brutal (Merom 2003, 33-

47). Recent research has also found support for the argument that violence against noncombatants yields political and military dividends (Pape 2003, 2005; Lyall 2009).

Do military strategies that target civilians in interstate armed conflicts help states achieve their aims? Are there conditions under which it is more or less effective? We argue that to determine the effectiveness of this phenomenon, it is essential to disaggregate civilian victimization into two types: strategies intended to coerce an adversary to surrender ("coercive victimization"), and strategies intended to eliminate civilians from a piece of territory ("eliminationist victimization"). Assessing the effectiveness of these two types of victimization is tricky because these strategies are not applied randomly and the factors that influence whether states choose to target civilians also influence the likelihood of victory. States engaged in costly wars of attrition, for example, often employ coercive targeting of civilians, but these wars are the most difficult type to win because they are typically fought by highly resolved states. This selection effect could bias the estimated effect of coercive victimization downward. On the other hand, states must first advance into an enemy's territory to implement an eliminationist strategy, making "winning" a prerequisite for targeting enemy civilians in these cases. This creates an endogeneity problem that could bias the estimated effect of eliminationist victimization upward. We use matching to correct for selection bias in cases of coercive victimization and instrumental variables analysis to correct endogeneity in cases of eliminationist victimization.

Our statistical results—generated from a dataset of interstate war outcomes between 1816 and 2003—yield a nuanced understanding of the effectiveness of civilian victimization. The effectiveness of civilian victimization depends on the type of strategy used, the regime type and size of the target, and historical time. As opposed to some previous work (Pape 2003, 2005), we find that coercive targeting is effective only when employed against anocracies (states in the

middle of the autocracy-democracy spectrum); eliminationist targeting is effective when used against all nondemocracies (both autocracies and anocracies) and small states. Eliminationist victimization, according to our results, has declined in effectiveness over time. We supplement our statistical analysis with an examination of two cases. The Siege of Paris in the Franco-Prussian War (1870-71) reveals that coercive victimization can be effective when the target faces dire military circumstances. The Second Anglo-Boer War (1899-1902) reveals the ways in which eliminationist victimization can yield military dividends.

The paper unfolds as follows. In the first section, we briefly review the literature on the causes of civilian victimization, emphasizing why leaders choose to target civilians. Next, we draw on the literature to develop hypotheses regarding the effectiveness of different types of civilian victimization as well as circumstances under which these strategies may be more or less effective. Third, we describe the data and methods we use in our statistical analysis, while in the fourth section we present the results of the analysis. The fifth section then investigates the causal effect of civilian victimization on war outcomes in two case studies. We conclude by offering some suggestions for further research.

The Strategic Logic of Civilian Victimization

The last decade has witnessed a surge of scholarly interest in the causes of various forms of civilian victimization, such as genocide, mass killing, and the intentional targeting of noncombatants in civil and interstate wars. One of the most important findings to emerge from this literature is that violence directed against the defenseless is not primarily a function of hatred, wickedness, barbarity, or innate evil. These and other factors no doubt contribute to civilian victimization, but the new literature claims that the bulk of the targeting of civilians that

occurs is instrumental: it is not an end in itself, but rather a means to an end. According to Valentino's "strategic perspective," for example, mass killing of noncombatants "is most accurately viewed as an instrumental policy—a brutal strategy designed to accomplish leaders' most important ideological or political objectives and counter what they see as their most dangerous threats" (Valentino 2004, 3). This strategy is typically pursued to accomplish the communization of society, rid a country of ethnic groups the leadership finds threatening or undesirable, or defeat powerful and dangerous insurgencies. Similarly, Downes (2008, 39) argues that civilian victimization in the context of interstate war is a "calculated risk, not an irrational gamble" that occurs in wars of attrition and territorial annexation. In the former, leaders resort to civilian victimization in a desperate bid to win and reduce their human costs of fighting. In the latter, groups viewed as likely to be sympathetic to the enemy are targeted to deter them from providing support or to remove them from the area entirely. Valentino, Huth, and Croco concur that "the killing of noncombatants during war is often a calculated military strategy designed to achieve victory by coercing the adversary or by undermining the war-related productive capacity of his civilian population" (Valentino, Huth, and Croco 2006, 340).

Scholars studying violence in civil wars have reached broadly similar conclusions. Kalyvas, for example, notes that "even a cursory reading of descriptions points to the predominance of instrumental violence in civil war contexts" (Kalyvas 2004, 99). Kalyvas argues that armed groups use violence to punish defection by civilians and hence deter it. The goal is to produce compliance, a situation where the population acquiesces in an actor's rule and refrains from providing information or other support to rival actors (Kalyvas 2004, 98). Valentino, Huth, and Balch-Lindsay (2004) claim that large-scale violence by governments engaged in counterinsurgency is adopted to destroy the civilian base of powerful and threatening

rebel movements. Hultman (2007) contends that civilian victimization is a means for struggling

rebels to raise the government's political and military costs, thereby adversely influencing the

government's perception of the cost and likelihood of victory. Wood (forthcoming) similarly

argues that weak rebel groups rely more on violence to terrorize noncombatants into compliance

because they are less able to provide services in exchange for support and less able to confront

government soldiers in battle. Balcells (2009), in an examination of conventional civil wars,

suggests that actors use violence to consolidate their control over territory by preventively

eradicating potential enemy supporters. Such violence tends to be employed where it is most

useful, i.e., in communities where supporters of the contending factions are closely balanced.

In short, much of the literature on the causes of civilian victimization concludes that such

violence is rational and instrumental, implemented by actors who variously wish to extract

compliance from populations, secure control over territory, or achieve victory in war. When

these objectives are placed in jeopardy—as when civilians start defecting to the enemy, or wars

bog down into costly and protracted stalemates—governments and rebels often choose to enact

strategies of civilian victimization. But do these strategies work?

Civilian Victimization: Definition, Typology, and Hypotheses on Effectiveness

We define civilian victimization as a military strategy that either kills noncombatants

intentionally, or wields force in such an indiscriminate manner that it cannot help but kill many

thousands of civilians (Downes 2008, 14-21).[1] As a strategy, civilian victimization is decided

upon by top political and military elites, and consists of an extended campaign of military action

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[1] Throughout this paper, we use the terms "civilian" and "noncombatant" interchangeably to mean individuals who are not members of the armed forces, do not wear military uniforms, and do not take a direct part in hostilities. See Melzer 2009.

(e.g., the bombing of Germany or the Siege of Leningrad) rather than a single incident (the bombing of Dresden or the My Lai Massacre).

Coercive Civilian Victimization

In interstate wars there are two varieties of civilian victimization. The first is what we call coercive victimization, which typically takes the form of starvation blockades—such as the siege of Jerusalem (70 A.D.), the Allied blockade of the Central Powers (1915-19), and the blockade of Biafra in the Nigerian Civil War (1967-70)—or aerial bombardment of civilians, as in the German "Blitz" on Britain or the British bombing of Germany in World War II. Coercive victimization is largely synonymous with what others have called punishment. According to the logic of punishment, leaders target an adversary's civilian population in the hope that the costs to its society will induce the enemy regime to renounce its war aims, or alternatively that the suffering meted out to noncombatants will cause them to rise up and demand an end to the war (Pape 1996, 58-86). In the first of these pathways, leaders of the target country may decide to call a halt to the war if the costs to noncombatants exceed the value of the issue in dispute. This mechanism assumes that leaders care about the suffering of their civilian population such that pain inflicted on civilians constitutes a real "cost." Coercive victimization of civilians can also affect a target's calculations about continuing to resist by influencing the behavior of the population itself: the fear of violent death that results from being the target of deadly attacks could motivate civilians to demand that their leaders stop the war. This mechanism assumes that civilian targeting dampens the resolve of the public and that the population has the means to influence its leader's wartime decisions.[2]

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[2] The assumptions underlying each of these mechanisms may not hold in nondemocracies. We discuss the mediating effect of regime type further below.

There is no shortage of statements by policymakers and military officers expressing the belief that targeting civilians can successfully coerce an end to wars. In one of the most famous formulations of this view, Union General William T. Sherman, accused by Confederate officers of barbarism at Atlanta during the American Civil War, famously responded, "War is cruelty. There is no use trying to reform it. The crueler it is, the sooner it will be over" (Sherman 1892, 126). Former British Prime Minister Stanley Baldwin argued during the interwar period that the side that could kill more enemy civilians would prevail in future wars: "the bomber will always get through. The only defense is in offense, which means that you have to kill more women and children more quickly than the enemy if you want to save yourselves" (quoted in Hastings 1979, 43). One of Baldwin's successors, Winston Churchill, wrote during World War II that the surest way to defeat Nazi Germany was "an absolutely devastating, exterminating attack by very heavy bombers from this country upon the Nazi homeland" (quoted in Garrett 1993, 47).

Most of the scholarly literature on civilian victimization (for rare exceptions, see Pape 2003, 2005) suggests that contrary to the views of these military officers and policymakers, coercing states by targeting civilians is not effective. Pape's survey of all cases of strategic bombing from World War I to the Persian Gulf War finds hardly any cases in which punishing civilians persuaded states to make major concessions (Pape 1996; see also Horowitz and Reiter 2001). Olson's study of three blockades of Britain shows that although the embargoes became progressively more encompassing, Britain's vulnerability to hunger actually decreased as the state was able to adjust and compensate (Olson 1963; see also Pape 1997 on sanctions).

Coercion in general is difficult for a variety of reasons. Modern states are highly nationalistic, so making substantial concessions offends the national pride of the population and thus leaders who make concessions to adversaries could face removal or punishment after the

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fact at the hands of angry constituents. This is compounded by the fact that because coercive strategies work relatively slowly they leave coercers vulnerable to the growth of domestic opposition to the war (Pape 1996, 21; Arreguín-Toft 2001). Furthermore, in disputes that escalate to war targets tend to be highly resolved. The limited destructive power of conventional weapons and the ability of governments to adjust to attacks by enacting civil defense measures make it unlikely that non-nuclear coercion can raise costs to an intolerable level (Pape 1996, 22, 23). Olson contends that the combination of strong bureaucratic state structures and the size and wealth of states allows them to lower their vulnerability to blockade by rationing food, substituting one good for another, or cultivating more land to increase food production (Olson 1963). Finally, punishment theory assumes that a population cowering in shelters under massive bombardment or weakened by hunger and disease can act collectively to force its leaders to submit to the enemy's demands. On the contrary, the bombing campaigns of World War II generated political apathy as people struggled to survive on a daily basis; bombing also inhibited their ability to engage in collective action.

Thus the beliefs of the military and political leaders who implement coercive victimization, on the one hand, and the literature on the effectiveness of coercion and punishment on the other hand suggest two competing hypotheses:

- *Coercive Hypothesis 1 (CH1)*: Coercive civilian victimization increases a state's likelihood of victory.

- *Coercive Hypothesis 2 (CH2)*: Coercive civilian victimization does not increase a state's likelihood of victory.

Eliminationist Civilian Victimization

We label the second type of civilian victimization eliminationist. Rather than seeking to coerce the surrender of an adversary by targeting its civilian population, eliminationist victimization is intended to gain or maintain control over territory. Eliminationist victimization occurs when a belligerent believes that it will be unable to extract compliance from a particular group. This can occur for multiple reasons, although the most common is that the group in question shares the ethnicity or ideology of the belligerent's opponent, or has a history of collaboration with the enemy (Bulutgil 2010). In some cases, belligerents have already tried selective forms of violence without success. Believing the group to be disloyal and willing to aid the enemy at the first opportunity, belligerents decide to eliminate the population rather than try to control it.

In practice, eliminationist victimization occurs in two different circumstances. By far the more common type in interstate wars is cleansing or massacre in wars of territorial conquest designed to induce the targeted group to flee or, less commonly, to destroy it by mass murder. A good example is the behavior of the Balkan states in the First and Second Balkan Wars (1912-1913): in seizing territory from the Ottomans in the first war, Bulgaria, Greece, and Serbia massacred Muslim Turks. In the second war, when the allies turned on each other, each took aim at its adversaries' civilians in territory it claimed for itself (International Commission 1993). The second circumstance, less common in interstate wars but frequent in civil and colonial wars, is when a state is trying to quell an insurgency occurring in territory it nominally rules but does not completely control. Where a population is viewed as hard-core supporters of—or inseparable from—insurgents, the state may employ violence not to deter people from supporting the rebels, but instead to prevent them from doing so via massive killing, confinement in concentration

camps, expulsions, or deportations (Evans-Pritchard 1949, 163; Danner 1994, 42-43). Examples include Spain in Cuba, France in Algeria, the Soviets in Afghanistan, and Sudan in Darfur.

Does eliminationist victimization help states win wars? Scholars have found some evidence that eliminationist targeting decreases insurgent activity. Lyall, for example, argues that "widespread indiscriminate violence creates enormous logistical problems for insurgencies. At the extreme, indiscriminate violence can erode rebel resources through forcible population resettlement …. even lesser amounts of indiscriminate violence can undermine an insurgent organization's military effectiveness by driving a wedge between locals and insurgents" (Lyall 2009, 336-37; see also Arreguín-Toft 2001). Empirically, Lyall finds that Chechen villages exposed to random Russian artillery fire subsequently experienced fewer insurgent attacks, suggesting that indiscriminate violence might actually discourage rebel recruitment and hinder the rebels' ability to mount further strikes.

Downes (2008) contends that eliminationist victimization is particularly effective as an interdiction strategy, that is, when it physically prevents a population from providing support to rebels. He maintains that indiscriminate violence has paid military dividends when it has allowed government forces to interdict all contact between the insurgents and civilians, as internment of noncombatants in northern Libya did during the Italo-Sanusi War (1923-32). In 1930, Italian commander Rodolfo Graziani took a series of steps to isolate the Sanusi rebels, such as instituting flying columns and disarming the population. But as Evans-Pritchard puts it, "It may be doubted whether all these measures would have been effective if he had not also started his immense concentration camps for the entire tribal population of Cyrenaica, about whose feelings the General had no illusions….The guerrillas thus found themselves cut off from local sources of

supply and forced more and more to rely on Egypt for the bare necessities of life and of war," a life-line that Graziani soon severed with barbed wire (Evans-Pritchard 1949, 188-89).

When used as a tool of interdiction, eliminationist victimization employs the logic of denial: a strategy intended to coerce an adversary by frustrating its military strategy for continuing the war. Such violence does not follow the logic of deterrence, which by targeting some people hopes to frighten others to change their behavior. Rather, killing the population (or otherwise eliminating it) in a contested area prevents either the other side (in conventional wars) or rebels (in civil wars) from recruiting new participants or obtaining logistical support from the residents of that territory. Pape (1996) argues that denial strategies are the most effective military strategies. As such, we hypothesize that civilian victimization contributes to victory when employed in this manner.

- *Eliminationist Hypothesis 1 (EH1)*: Eliminationist civilian victimization increases a state's likelihood of victory.

It is far more common in the literature to find the argument that eliminationist victimization in these contexts is ineffective and even counterproductive. The logic is well stated in William Polk's survey of insurgency and counterinsurgency since the American Revolution: brutality by state actors in the context of popular rebellions merely adds fuel to the fire rather than dousing the flames. The reason is that "the more brutal they [government forces] are in suppressing the general population, the more recruits the fighters gain, because in every instance in which a single combatant or even an innocent bystander is arrested, detained, wounded, or killed, a dozen of his relatives and friends are outraged" (Polk 2007, 34). Violence simply provides the rebels with recruits, aggravating rather than ameliorating the problem. Governments

combating insurgencies thus find that their advantage in military power is self-defeating because the use of that power only makes the insurgents stronger.

This logic is powerfully demonstrated in a number of cases, including the German invasion of the Soviet Union, and Soviet and U.S. counterinsurgency campaigns in Afghanistan and South Vietnam, respectively. In the German case, indiscriminate brutality by Nazi forces turned potentially friendly populations hostile, and large-scale reprisal massacres in response to partisan attacks merely swelled the ranks of the resistance (Cooper 1979). In Afghanistan, the Soviet military succeeded in depopulating large tracts of the country (killing over 1 million people and driving a further 5 million to flee the country) but was never able to stamp out the mujahideen (Sliwinski 1989). Finally, new research on the effect of U.S. bombing in South Vietnam finds that levels of Vietcong control in particular villages increased after those villages were bombed, demonstrating the counterproductive consequences of indiscriminate violence for government control over territory (Kocher, Pepinsky, and Kalyvas 2008).

Kalyvas explains these findings by arguing that violence that is not directed at particular people for particular reasons, but which victimizes groups based merely on their location, nationality, or membership in an ethnic group alienates the population because cooperating with the employer of such violence does not guarantee survival. As he puts it, indiscriminate violence "defeats deterrence because it destroys the possibility of anticipation of a forthcoming evil and, hence, the ability to avoid it….Its sheer unpredictability makes everyone fear lethal sanctions regardless of their behavior: innocence is irrelevant and compliance is utterly impossible" (Kalyvas 2006, 143). Because eliminationist victimization is wielded indiscriminately and may actually encourage civilians to cooperate with the enemy, this strategy does not increase the likelihood of victory.

- *EH2*: Eliminationist victimization does not increase a state's likelihood of victory.

Conditional Factors Influencing the Effectiveness of Civilian Victimization

Because the logic underpinning coercive and eliminationist targeting is different, the circumstances in which each strategy is most effective probably varies. Below we develop hypotheses on how enemy regime type, the target state's size, and historical proximity to the present might mediate the effect of both types of civilian victimization.

Target Regime Type

Some analysts posit that civilian victimization is more effective when it is employed against democratic governments. Pape's work on suicide terrorism suggests that targeting civilians is effective against democracies because their citizens have a low cost tolerance and can easily affect government policy (Pape 2003, 2005). This argument applies specifically to coercive civilian victimization, which relies on the logic of punishment in assuming that leaders care about the suffering of the civilian population and that the population has a means of influencing their leaders' decisions. Both of these assumptions are tenuous in autocratic settings. Many authoritarian leaders (Stalin, Mao, Idi Amin, and Saddam Hussein, for example) have killed massive numbers of their own people. Other such regimes have waged war with callous disregard for the number of soldiers lost or the well-being of their population. If leaders are insensitive to civilian suffering, then harming the population obviously cannot exert any coercive leverage. Moreover, there is no routinized or non-violent way for the general public in autocratic societies to induce the regime to change policies. Elections—if they occur at all—are rigged in favor of the incumbents, and protests against the fraudulent results—as occurred in Iran in

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2009—are crushed with violence. In democracies, by contrast, leaders neglect the welfare and

preferences of the electorate at their peril because voters can remove them at the polls. This high

ability to affect policy by putting leaders' political tenure in jeopardy would seem to render

democracies more susceptible to coercive civilian targeting.

- *CH3*: Coercive civilian victimization is more effective against democracies than

  against non-democracies.

There are also theoretically grounded reasons why coercive targeting may actually be less

effective against democracies. The argument above assumes that citizens of the target state direct

their anger and frustration at their own government rather than at the enemy who inflicts the

pain. This assumption violates the tendency of groups to grow more cohesive in the face of

external threats and attacks. If citizens react to punishment tactics with apathy or with a renewed

commitment to resist the enemy, their ability to influence government policy is unlikely to

prompt their leaders to acquiesce. In fact, electoral accountability may actually undermine the

effectiveness of coercive victimization if citizens direct their ire at the state that is targeting

them. In these cases, leaders have an additional incentive to resist in the face of civilian targeting

because they may be punished electorally if they back down. The literature on public opinion and

the use of force has found that democratic publics react to threats by "rallying around the flag"

and increasing their support for the government, not by pressuring their leaders to make

concessions (Schubert, Stewart, and Curran 2002). Furthermore, the leaders most likely to be

punished electorally during wartime are those that are unable to secure victory or who make

concessions to the enemy (Reiter and Stam 2002; Bueno de Mesquita et al. 2003). This suggests

that coercive victimization is unlikely to be effective against democracies and may actually be

counterproductive because the pain inflicted on society increases the costs of the war, making it that much more imperative that the leaders ultimately deliver victory.

- *CH4*: Coercive civilian victimization is less effective against democracies than against non-democracies.

A third possibility is that the relationship between target regime type and the effectiveness of civilian victimization is curvilinear. Targeting civilians could be particularly effective against anocracies owing to the fragility of these regimes. Because autocracies and democracies are more consolidated they are better able to implement countermeasures that can mitigate the effects of coercive targeting. Both of these regime types tend to have strong bureaucratic state structures that enable them to lower their vulnerability to punishment by building shelters, evacuating cities, rationing food, and so forth. Bureaucratic structures in anocracies are less robust and consequently less able to protect their populations from enemy strategies that target civilians. In addition, their lack of consolidation and semi-oppressive domestic policies make it less likely that the public will respond to punishment strategies by rallying around the government. Furthermore, because citizens have some ability to influence government policy in these regimes, the government may feel pressure to back down in the face of civilian suffering. Together, these three factors make it likely that coercive targeting will be more effective against anocracies.

- *CH5*: Coercive civilian targeting is more effective against anocracies than against consolidated autocracies or democracies.

Target regime type may also influence the effectiveness of eliminationist victimization but for different reasons. As discussed above, states often target civilians in territorial wars to eliminate groups from contested territory and prevent the emergence of a fifth column that could

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potentially aid their enemy. This strategy is likely to be effective only in cases where the targeted

group would actually have provided support to the other side. If the population was unlikely to

aid the enemy, eliminating it from the territory will have no effect on the outcome of the war.

Autocratic states often abuse their own citizens, depriving many of them of basic human rights.

Because of this, autocratic citizens may be unwilling to aid their government when it faces an

external threat. Thus, targeting these civilians is unlikely to yield battlefield gains. In some cases,

such as the Wehrmacht's policy of reprisal massacres during Operation Barbarossa on the

Eastern Front, eliminationist targeting may actually be counterproductive because it alienates

potential allies in the local population. In contrast, democracies protect the basic rights of their

citizens and allow them to participate in government. Because of this, their citizens are likely to

be more attached to the state—and thus more likely to aid their government once it has been

attacked. In these situations eliminationist targeting is more likely to be effective since targeted

groups are more likely to aid the enemy in the absence of such tactics.

- *EH3*: Eliminationist targeting is more effective against democracies than non-
  democracies.

Population Size

There is reason to believe that civilian victimization should be more effective when it is

employed against smaller targets. Large states are likely to have more resources at their disposal

to devote toward countermeasures— more materiel to allocate to the construction of bomb

shelters, more internal sources of food production to counteract blockades, and more potential

areas to relocate citizens affected by bombing. The relative level of punishment for each civilian

killed is also smaller in larger states. A coercive victimization strategy would thus have to be

much more extensive in a large state in order to raise the costs of war to a sufficient degree to exact concessions. Similarly, eliminationist victimization employed as an interdiction strategy—to cut off contact between insurgents and civilians and prevent the latter from aiding the former—should work better when the targeted population and the geographic area being contested are small.

- *CH6/EH4*: The smaller the geographic area or population of the target, the more likely that coercive and eliminationist victimization will contribute to victory.

Change over Time

Both types of civilian victimization may be less effective now than they were in the past. As already noted, states have grown more resistant to coercion over time as populations have become increasingly nationalistic and state bureaucracies have grown stronger and more able to protect their people from the hardships of war. The increased resilience of modern nation states is particularly likely to decrease the effectiveness of coercive civilian targeting. In addition, the spread of norms and law prohibiting depredations against noncombatants may have increased the likelihood of outside intervention in conflicts where one or both sides target civilians. If civilian victimization prompts third party intervention, the strategy may actually be counterproductive. Third party intervention would seem to be most likely against eliminationist victimization after 1945 given the UN Convention against Genocide and the strong norm against territorial conquest that has developed since the end of World War II (Atzili 2006/07; Fazal 2007).

- *CH7/EH5*: Coercive and eliminationist victimization have decreased in effectiveness over time.

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General Research Design

To evaluate our hypotheses about the effectiveness of civilian victimization, we use the

Correlates of War dataset of participants in interstate wars, modified in three ways. First, we

updated the list to include wars through the 2003 Iraq War. This resulted in the addition of six

interstate conflicts: Armenia-Azerbaijan (1992-94); Ethiopia-Eritrea (1998-2000); India-Pakistan

(Kargil, 1999); U.S.-Yugoslavia (Kosovo, 1999); U.S.-Afghanistan (2001); and U.S.-Iraq (2003).

Second, following recent analyses we divided several long multi-phase, multi-participant wars

into their constituent parts (Reiter and Stam 2002).[3] This is particularly important because COW

codes many states that were defeated at some point during such conflicts as winners.[4] We obtain

more accurate codings by separating wars like this into multiple conflicts. Third, we omit many

minor participants in wars like the Austro-Prussian and Franco-Prussian, World War II in

Europe, Korea, Vietnam, and the Persian Gulf War. The rule we followed was that a belligerent

had to suffer at least 10 percent of the battle deaths in the war to be included in the dataset.

We assess effectiveness by estimating the impact of coercive and eliminationist

victimization on a trichotomous indicator of war outcomes—wins are coded as 2, draws as 1, and

losses as 0—using an ordinal logit estimator.[5] Most of the codings for bilateral wars are drawn

from the COW dataset; we code outcomes for divided multilateral wars and recent conflicts

ourselves. Because there are multiple observations from each conflict and these observations are

not independent we use robust standard errors clustered on each war.

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[3] Wars divided into multiple conflicts include World War I (four); World War II (nine); Vietnam (two); and Persian Gulf (two).

[4] Examples include Russia, Serbia, and Romania in World War I, and Norway, Belgium, the Netherlands, France, Yugoslavia, and Greece in World War II.

[5] In robustness tests we used a logit estimator and two dichotomous variables—win/loss with draws excluded and win/loss with draws coded as losses. Results were similar. All robustness tests will be made available in an online appendix upon publication.

Our key explanatory variables are dummy variables for coercive victimization and eliminationist victimization. As shown in Table 1, there are 31 instances of coercive victimization and 30 instances of eliminationist victimization inflicted by 54 belligerents in a total of 30 different wars.

[Table 1 about here]

To assess the conditional hypotheses that the effect of civilian victimization is contingent on the enemy's regime type, the size of the enemy population, and time we multiply our two dummy variables by measures of each of these factors. We use the Polity IV index to create a dummy variable, enemy democracy, which is coded 1 if the enemy had a Polity score greater than 6. In the analysis of coercive targeting we also include a dummy variable for enemy anocracy, which is coded 1 if the enemy has a Polity score greater than -7 and less than 7. We use population size (logged) as a proxy for state size; data are taken from the COW National Material Capabilities dataset. Finally, we include a counter variable starting at zero in the year of the first war in the dataset (1823) to test the hypothesis that civilian targeting has decreased in effectiveness over time.

We also control for a number of variables that the literature on military effectiveness suggests influence the likelihood of victory in war. The first is material capabilities, which we operationalize as the share of total capabilities of all the belligerents in the war controlled by each state (Desch 2008; Reiter and Stam 2002). Data are calculated from the COW National Material Capabilities dataset. Democracies are also thought to be more likely to win wars, and particularly wars that they start (Reiter and Stam 2002; Bueno de Mesquita et al., 2003). We use the Polity IV index to measure each belligerent's regime type, designating countries that score 7

or higher as a democracy.[6] Data on war initiation is taken from Reiter and Stam (2002), and an interaction term (democracy × initiation) gauges the joint effect of democracy and initiation. Lastly, we include a dummy variable that codes whether a war was fought in the post-1945 period, as some analysts have found a decrease in decisive war outcomes and an increase in draws after World War II (Fortna 2004).

Evaluating the Effectiveness of Coercive Victimization: A Matched Analysis

States tend to employ coercive victimization when they experience high losses, become bogged down in wars of attrition, and when they are desperate to win. This makes statistical inference problematic because it is difficult to assess whether civilian targeting influences the war outcome or whether the desperate conditions that make civilian targeting likely are driving the outcome. One way of dealing with this problem is to use matching to preprocess the data.

Matching is a non-parametric statistical technique that attempts to correct for bias that results from non-random treatment assignment (Ho, Imai, King, and Stuart 2007). Matching compensates for this problem by selecting only those control cases that are most similar to the treatment cases. This enables us to compare treated cases to those cases that had a high probability of receiving the treatment but did not. For our purposes, matching permits us to compare war outcomes where states coercively targeted civilians with those where states had the opportunity (they possessed the requisite material capabilities) and the willingness (they were desperate) to do so but refrained.

To implement matching we use pretreatment variables identified by the literature (Valentino, Huth, and Croco 2006; Downes 2008) as causes of civilian victimization and civilian

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[6] Regime type for coalitions was calculated by weighting each ally's Polity score by the percentage of military personnel it contributed to the coalition.

casualties to predict whether belligerents will engage in coercive targeting. Although the leading

studies do not disaggregate civilian victimization into coercive and eliminationist types, these

works strongly suggest that coercive targeting in particular is most prevalent in wars of attrition.

These studies also find that more powerful states are more likely to target civilians because they

have the material resources to do so. Some find that an increased sensitivity to the costs of

fighting makes democracies more likely to target civilians in these wars, and that civilian

victimization has become less prevalent after 1945. Thus we employ a logistic analysis to predict

coercive victimization using an attrition dummy variable that signifies "wars generally lacking in

maneuver or movement, which are instead dominated by static, linear, or trench operations"

(Downes 2008, 60); a variable which measures the relative military capability of the combatants

as described in the previous section; the Polity score of the belligerent to measure its regime

type; and a dummy variable for the post-1945 period.[7] Each belligerent is then assigned a

propensity score equal to the probability that it would target civilians in a coercive campaign.

Cases of coercive victimization are then matched with control cases that have the closest

propensity score.

Matching was performed using *MatchIt* (Ho, Imai, King, and Stuart 2007). One to one

nearest neighbor matching without replacement after discarding control cases outside of the

common support yielded the best results. Table 2 shows that the matching process significantly

improved the balance of the data. Comparing the difference in the means of the overall

propensity score and each variable for the entire dataset and the matched dataset shows that

matching narrowed the differences between them. The difference in the mean propensity scores

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[7] Importantly, to be used in matching each of these variables must precede civilian targeting (that is, they must be pretreatment). Military capabilities, regime type, and the year the war occurred are each obviously pretreatment. The attrition variable is not as straightforward because it is possible that civilian targeting could occur prior to a war becoming a war of attrition, but empirically this is rarely the case. Belligerents almost always become bogged down in wars of attrition first and then decide to target civilians (Downes 2008, 78-82).

for the treatment and control group improved by 92 percent. The relevant control variables

improved by between 51 percent for regime type and 100 percent for attition.[8] Because matching

was not exact, however, parametric analysis with the relevant control variables remains

necessary.

[Table 2 about here]

Models 1 and 2 in Table 3 show that coercive targeting does not exert a statistically

significant effect on war outcome whether or not we control for selection effects: the variable is

insignificant using both the raw and matched datasets. The results from models 3 and 4,

however, suggest that the effectiveness of coercive victimization is contingent on regime type.

Analyzing the un-matched data in model 3, we find that coercive targeting is effective against

anocracies and is actually counterproductive when used against democracies. When employed

against anocratic governments, coercive victimization increases belligerents' probability of

victory by 41 percent (see Figure 1). When this strategy is employed against democracies, it

reduces belligerents' likelihood of winning by 20 percent.[9] Once we control for selection effects

in model 4, however, the negative effect of coercive targeting against democratic regimes

becomes negligible. Although statistically significant, the substantive effect is very small (less

than 0.00001 percent). On the other hand, the positive effect of coercive targeting against

anocracies grows stronger and remains statistically significant after matching. Targeting civilians

in these cases increases the probability of winning by 47 percent. This provides strong support

for CH5, while disconfirming CH3 and CH4. Controlling for the differential effect of coercive

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[8] Graphical tests generated from *MatchIt* confirm the improvement in balance post-matching. See the online appendix.
[9] Substantive effects are generated using *CLARIFY* (Tomz, Wittenberg, and King 2001) with continuous control variables held constant at their mean values and categorical variables set to their modes. Changes in predicted probabilities are thus generated for nondemocratic targets in wars prior to 1945 for states whose military capabilities account for 37.5 percent of all war participants.

victimization across regime types also provides evidence that the selection effects discussed above biased the aggregate estimates downwards, dampening the positive effect of coercive targeting against anocracies and augmenting its negative effect against democracies.

[Table 3 and Figure 1 about here]

In contrast to adversary regime type, we find no evidence that the effectiveness of coercive victimization is a function of the size of the enemy population, as posited by CH6. Estimates derived from models 5 and 6 reveal that regardless of the size of the enemy's population, coercive targeting never significantly increases the likelihood of victory.[10]

Our analysis of the effectiveness of coercive victimization over time yields conflicting results. Analysis of the matched and unmatched data indicates that the efficacy of coercive victimization declined between 1816 and 2003; the two disagree on whether this effect was ever statistically significant. Results using the unmatched data (from model 7)—represented in Figure 2 by the fainter lines—show that coercive victimization exerted a significant effect on victory until the 1930s: in the mid-nineteenth century coercive targeting could increase a belligerent's chance of winning by more than 47 percent. By 1923 this effect had dropped to 22 percent. Effectiveness continued to decline to the present day, actually reversing signs in the 1960s. The bold lines in Figure 2 (generated from model 8) agree that coercive victimization has become less effective over time, but suggest that its effect was never statistically significant. The large confidence interval using the matched dataset may stem from its small size (N = 62). It could also be caused by our having matched on the post-1945 dummy variable, which created a dataset with an equal number of control and treatment cases before and after 1945. We would expect this

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[10] For all of the interactive terms, CLARIFY is used to estimate changes in predicted probabilities and the corresponding confidence intervals to establish significance.

to mask the conditional effect of time. However, it may simply be that controlling for selection effects renders the conditional effect of time inoperative.

[Figure 2 about here]

Evaluating the Effectiveness of Eliminationist Victimization

Belligerents engage in eliminationist targeting to remove civilians from enemy territory in an attempt to prevent those civilians from providing support to their adversary. To conduct these types of campaigns, combatants must have conquered part of their enemy's territory. Thus, belligerents are often already "winning" the war (or at least advancing and taking territory) when they decide to target civilians. This makes isolating the causal effect of civilian targeting on war outcomes problematic because it is difficult to parse out whether targeting civilians makes victory likely or whether victory makes targeting civilians likely.

We use instrumental variable estimation to correct for the bias that arises from this endogeneity problem. Rather than using eliminationist targeting as our key explanatory variable, we use an instrumental variable that is closely correlated with eliminationist victimization but is unrelated to war outcome. We construct this instrument by estimating the underlying probability that a state will target civilians using only variables that are exogenous to war outcome. We then use this instrument to estimate the effect of eliminationist targeting on war outcome. This procedure corrects for the bias arising from endogeneity because the instrument is uncorrelated with the error term in the ordinal logit equation. In this case, the instrument—unlike the dichotomous indicator—is not influenced by the state's ability to conquer territory. As a result, the estimates are unbiased.[11]

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[11] Mallar 1977, Maddala 1983, and Greene 2003 found this procedure to yield asymptotically consistent estimates. Maddala 1983 recommends correcting the covariance matrix in order to improve efficiency, but Guilkey, Mroz, and

To implement this technique we need to identify variables that are good predictors of eliminationist targeting but are unrelated to war outcome (Bartels 1991; Bound, Jaeger, and Baker 1995). Again we draw on the literature on civilian victimization to select our predictors, focusing this time on the variables most likely to be associated with eliminationist targeting. One prominent finding is that belligerents are more likely to target civilians if they are involved in wars of territorial conquest. Thus, we include a dummy variable—annex—which is coded one if the belligerent aimed to conquer and annex territory. We also include a dummy variable for ethnic intermingling coded one if a belligerent had co-ethnics living inside its enemy's borders or if its enemy had co-ethnics living inside its borders. In these cases civilian targeting should be more likely because there is an obvious group that might aid the enemy, and thus the incentive to use eliminationist targeting is higher. It may be easier to dehumanize the enemy and justify targeting civilians when significant cultural differences divide the belligerents. To account for this possibility, we include a cultural difference dummy variable that measures whether the two belligerents are from different regions of the world as measured by the Correlates of War data. Finally, we include a past use dummy variable that indicates whether a belligerent targeted civilians in the most recent war it fought. Because states that have targeted civilians in previous wars have demonstrated insensitivity to the norms prohibiting the targeting of noncombatants, they should be more willing than other states to target civilians again.

Each of these variables should be exogenous to the outcome of the current war. Political aims established prior to the onset of hostilities should be unrelated to outcome as should the ethnic composition and location of the belligerents. Belligerents' strategies in prior wars should also be unrelated to the outcome of the current war. When we use these variables to estimate a

Taylor 1992 found that the more complex standard errors recommended by Maddala did not improve efficiency. Therefore, we do not adjust our standard errors but we do use robust standard errors clustered by conflict as discussed above.

logit equation to predict civilian targeting in Table 4, the model fit is very good, suggesting that

our instrument is highly correlated with the independent variable: McKelvey and Zavoina's R-

squared for the logit model is 0.46 and the area under the ROC curve is 0.91. We use this model

to generate the predicted probability of eliminationist victimization and then use this measure as

an instrument for eliminationist targeting in our ordinal logit analysis of war outcomes. Below

we compare the results of this analysis with the same analysis using the eliminationist targeting

dummy variable.

[Table 4 about here]

The results for our instrument of eliminationist victimization, shown in model 11 of

Table 5, are remarkably similar to results using the eliminationist victimization dummy variable

(model 10), suggesting that endogeneity is not driving our results. The coefficient for the dummy

for eliminationist targeting is 0.75 ($p < 0.10$); the instrumented coefficient is both larger (1.92)

and significant at a higher level of confidence ($p < 0.01$). Using the estimates from the

instrumental variable equation in model 11, we find that civilian targeting increases the

probability of victory by more than 40 percent. This supports EH1 and disconfirms EH2.

Contrary to the prediction of EH3, we find that eliminationist victimization is more

effective when it is employed against nondemocracies, increasing the belligerent's probability of

victory by almost 70 percent (see model 13 and Figure 3). When employed against democratic

governments, by contrast, the positive effect is statistically insignificant.

[Figure 3 about here]

Correcting for endogeneity also clarifies the relationship between eliminationist targeting

and population size. Using the un-instrumented variable (model 14), represented in Figure 4 by

the fainter lines, eliminationist victimization does not significantly affect the likelihood of

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victory at any size of the adversary's population. The bold lines in Figure 4 (generated from the instrumented version of eliminationist targeting in model 15), however, reveal that the strategy works well against states with small populations, increasing the probability of winning by more than 50 percent when it is used against states with fewer than 10 million people. As the enemy's population grows larger eliminationist victimization becomes less effective, becoming statistically insignificant for states with populations larger than 100 million.

[Figure 4 about here]

Finally, we find strong evidence for EH5: the effectiveness of eliminationist victimization has diminished over time (models 16 and 17). Figure 5 shows a remarkable similarity between instrumented and un-instrumented eliminationist victimization: the positive and statistically significant effect of the strategy in the mid-nineteenth century declines over time, becoming insignificant around 1950 and actually reversing signs around 1975. In the nineteenth and early twentieth centuries, eliminationist targeting (instrumented) could increase a belligerent's chances of winning by more than 60 percent. Today this strategy has no effect on the likelihood of victory and if the trend we document here continues, eliminationist victimization will become counterproductive in the future.

[Figure 5 about here]

Summary of Results

Overall we find that the effectiveness of civilian victimization is a function of the type of targeting strategy used and the circumstances under which it is employed. Contrary to the findings of previous studies, our analysis suggests that democracies are not especially vulnerable to civilian victimization. Coercive victimization, for example, improves belligerent's prospects

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for winning only when it is employed against anocracies. Although eliminationist targeting is effective more generally, it yields the best results when employed against nondemocracies. We also find that eliminationist victimization is more effective when employed against small states and that its effectiveness has decreased over time.

Civilian Victimization and War Outcomes: A Closer Look

In this section we briefly examine two cases in which a state employed civilian victimization—the Siege of Paris (1870-71) and the Second Anglo-Boer War (1899-1902)—to investigate the contribution of targeting civilians to the outcome. The first case suggests that coercive victimization enters into a target's decision calculus when it is already on the verge of defeat militarily; it cannot bring about capitulation on its own. Unlike previous historical work on the efficacy of punishment, we find that coercive victimization can work interactively with traditional military pressure to bring about surrender. The second case reveals that under the right circumstances, eliminationist victimization—because of its denial effects—can strike a decisive blow against the enemy.

Coercive Victimization: The Siege of Paris

The Siege of Paris during the Franco-Prussian War nicely illustrates the way in which coercive victimization can contribute to victory, while also highlighting the limitations of this strategy. After the disastrous battles of early September 1870, which resulted in the capture of Napoleon III and the destruction of much of the French Army, Prussian forces quickly converged on Paris. By mid-September, the French capital was surrounded and the siege of the city had begun. On January 5, 1871, the Prussians began an indiscriminate artillery bombardment. Between 300 and

400 shells per day struck the city, mainly the neighborhoods on the Left Bank of the Seine. After a final, desperate sortie by National Guard troops was beaten back, the government requested an armistice, which was granted on January 27, ending the siege after 130 days.

The number of deaths attributable to the siege is disputed. Some sources list 6,251 French deaths from all causes during the siege (Horne 1965, 244). Others estimate more than 47,000 "excess deaths" attributable to the siege by comparing weekly deaths during the siege to weekly deaths from before the war (Urlanis 1971, 265). Whichever figure one accepts, it is clear that malnutrition and disease resulting from the lack of food were responsible for most of the pain and suffering inflicted on the civilian population during the siege. By early December, one observer noted in his journal, "People are talking only of what they eat, what they can eat, and what there is to eat. Conversation consists of this, and nothing more….Hunger begins and famine is on the horizon" (quoted in Horne 1965, 176). It was a short step from hunger and malnutrition to disease and death. According to Horne's account, "Smallpox cases mounted rapidly, as did typhoid, now that the Siege forced Paris to draw most of her drinking water unfiltered from the foul Seine….January brought an alarming increase in the number of deaths…it was pneumonia caused by the cold that particularly helped to augment the mortality figures" (Horne 1965, 221). Deaths from typhoid and small pox were five and fourteen times higher, respectively, than during the same period a year earlier (Urlanis 1971, 265).

Contemporaneous evidence illustrates two important points regarding the relative effectiveness of the different tactics of coercive victimization in Paris during the siege. First, observers uniformly agree that the Prussian bombardment had virtually no effect on the morale of the population. The shelling caused relatively few casualties, killing 97 civilians and wounding 278 (Horne 1965, 278). Although the shelling was frightening at first, people quickly

became indifferent to it (Horne 1965, 217; Becker 1969, 189, 194; Richardson 1982, 109-10; Kranzberg 1950, 133). Second, the hunger and privation that resulted from the siege had a pronounced effect on the attitudes of the population and probably contributed to the government's decision to surrender. The greater impact of food deprivation was captured by one resident, who noted that "the prospect of possible starvation is fraught with such unknown terror that it renders us quite callous to the dangers of bombardment" (Horne 1965, 218). One historian of the siege concludes that the Prussian strategy of starvation was effective: "Faced with the imminent prospect of famine on a horrifying scale, the Government decided that it could not delay negotiating an armistice any longer" (Baldick 1964, 222). Others are more measured in their assessments, but still argue that the government's anticipation of "the complete exhaustion of the food supplies in the near future" played an important role in leading it to ask for an armistice (Kranzberg 1950, 164).

Aside from the mounting civilian suffering, however, two other factors contributed to the French decision to surrender. First, French military prospects were bleak. Two sorties by the garrison out of Paris (one in November, and one in mid-January) failed to break the iron ring encircling the capital. Moreover, there was little prospect of a rescue, as the new armies raised by the provisional government were defeated by the Prussians. The military situation faced by French commanders in January 1871 was thus just as dire as that facing the civilian population. Second, the possibility of revolution and civil war in Paris made surrender both dangerous but also imperative. The communists wanted to hold out and sortie the entire population, an eventuality the government regarded with horror. The government in Paris was in fact facing two enemies, "one which, night and day, tightened his ring of fire and steel, the other which at every instant was awaiting the moment to hurl itself upon the Hotel de Ville" (quoted in Horne 1965,

223). If the government asked for terms it risked sparking a communist insurrection, yet peace

with the Prussians was necessary to crush the government's domestic enemies on the Left. When

the expected uprising came on January 22, writes Horne (1965, 229), "Rather than attempt to

fight a war on two fronts, the Government considered it imperative to obtain an armistice with

the least delay."

In short, in combination with calamitous French military circumstances and the need for

an armistice to prevent communist revolution, civilian suffering inflicted via starvation and

disease helped convince French commanders in Paris to surrender. Prussian bombardment, by

contrast, did little to weaken French morale. This brief case study illustrates that coercive

victimization can nudge a target closer to surrender when it is already on the ropes, but cannot

bring about a capitulation in the absence of severe military pressure.

Eliminationist Victimization: The Second Anglo-Boer War

The Boer War provides an example of the role that eliminationist victimization can play in

winning a war.[12] After British forces defeated their Boer opponents in a series of conventional

battles in early 1900, the Boers—rather than capitulate as the British expected—shifted their

strategy away from set-piece battles to hit-and-run guerrilla warfare, striking at British supply

columns and lines of communication. In response, British forces instituted increasingly

draconian counterinsurgency measures, beginning with farm-burning, proceeding to full-fledged

scorched earth, and culminating in the internment of almost the entire Boer (and African)

population in the two former republics. Owing to overcrowding, inadequate rations, unsanitary

conditions, and poor medical care, disease raced through the camps and took a devastating toll

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[12] Although COW does not consider this conflict to be an interstate war, other scholars (Gleditsch 2004; Fazal 2007) argue that the Boer republics were independent, making the war against Britain an interstate conflict.

on the detainee population: nearly 28,000 Boer civilians died, almost all of them women or

children under the age of sixteen (Pretorius 2001, 44). Mortality in the African camps was nearly

as severe, with 20,000 native Africans losing their lives (Kessler 2001, 147-48). By early 1902

the Boer guerrilla bands, hemmed into an ever-shrinking area by British scorched earth tactics

and fearing for the survival of their people, agreed to lay down their arms and surrender their

sovereignty to British rule.

Numerous historians have concluded that British policies of civilian victimization in the

Boer War played a crucial role in winning the war (Spies 1977, 287; Pakenham 1979, 600-604;

Nasson 1999, 223), but the most telling evidence comes from the words of the sixty Boer leaders

who gathered in Vereeniging in May 1902 to debate ending the war. Other factors surely

mattered, such as the mounting threat from surrounding native African tribes and the frightful

physical condition of the commandos. However, in a document penned by Judge Barry Hertzog

and Jan Smuts that finally broke the deadlock among the Boer delegates, the first two factors

mentioned were direct consequences of the scorched earth strategy: the deficiency of supplies

owing to the "destruction of all means of existence" by British forces, and the "unheard-of

condition of suffering and sickness" in the concentration camps which raised the "horrid

probability…that, by continuing the war, our whole nation may die out in this way" (quoted in

Kruger 1974, 503). The burning of farms, destruction of food, and removal of humanity by the

British, in other words, eventually made it nearly impossible for the guerrillas to continue

fighting and forced them to confront the possible extinction of their people.

Not all strategies aimed at civilians in this war were equally effective. Farm-burning, for

example, was initially counterproductive: it drove many Boer men back into the field by

destroying their homes. As the war dragged on, however, and British counterinsurgency strategy

shifted from punishment—aimed at deterring people from assisting the rebels or coercing them to stop—to denial—simply making it impossible for civilians to help the insurgents by destroying all foodstuffs and interning the population in disease-infested camps—it became increasingly effective. Moreover, unlike in the Siege of Paris, civilian victimization in the Boer War was the one of the most important reasons—if not the main reason—why the rebels found themselves in dire straits militarily. The suffering of Boer civilians served a direct military purpose by depriving the Boer insurgents of the supplies they needed to fight. Other factors undoubtedly played a role, such as the Boers' lack of an external sanctuary, the small size of the Boer republics, and the ability of the British to capture the entirety of the population and deny the Boers access to it. But eliminationist victimization—by denying the Boer commandos access to supplies, penning them into an ever shrinking corner of the country, and threatening them with the extinction of the Boer race—played a key role in winning the war.

Conclusion

There is no doubt that targeting civilians in war is a crime, but is it also a strategic blunder? Statistical analysis of the two forms of civilian victimization in interstate wars showed that the efficacy of both strategies depended on the regime type of the target state. Eliminationist victimization significantly increased the likelihood of victory, particularly when used against nondemocracies and states with small populations. In addition, eliminationist strategies worked far better in the past than they do in the present. Coercive victimization possesses much more limited utility, working only when employed against anocratic governments. The ineffectiveness of civilian victimization against democracies contradicts previous research that maintains that anti-civilian violence works against democracies (Pape 2003, 2005). Our examination of the

Siege of Paris revealed the limited utility of coercive victimization, but also suggested that punishment and denial can work interactively to produce victory. The Boer case illustrated how eliminationist victimization can pay military dividends when it denies the enemy access to the resources and manpower they need to prosecute the war.

Although we can be fairly confident that selection bias and endogeneity do not affect our statistical results, there are clearly several limitations to our investigation. War outcome, for example, is a relatively blunt indicator of effectiveness. Particularly in cases of eliminationist victimization, other dependent variables—such as post-war rebellion by the targeted group, or militarized disputes with the state from which territory was taken—may provide more analytical leverage on the efficacy of civilian victimization. Wars are also a blunt unit of analysis: future work might break wars down into war-years, particular campaigns, or exploit variation across time and space within a single conflict using statistics or case studies. Another useful addition would be a measure of military strategies other than civilian victimization or an indicator of each belligerent's military vulnerability.

Perhaps the most interesting question that emerges from this research is why the effectiveness of civilian victimization has declined over the last two centuries. This is a fertile avenue for future research, and several possible answers should be explored. One intriguing possibility is that both material and normative changes in the international system have rendered the circumstances in which civilian victimization is most effective—coercive campaigns against anocracies, and eliminationist campaigns in general—less likely to occur. Norms against conquest have reduced the number of wars to take territory, which triggers eliminationist victimization. Norms of a different kind—those that prohibit the intentional harming of noncombatants—may also play a role by spurring third parties to intervene and frustrate the aims

of states that kill large numbers of civilians, as NATO did in Kosovo in 1999. Finally, war—whether characterized by civilian targeting or not—simply became less decisive after 1945, as the increase in the number of draws attests (Fortna 2004). Perhaps the same dynamics responsible for this trend, such as the Cold War stand-off in which wars were kept limited by the superpowers to avoid the possibility of direct conflict between them, also explain the reduced effectiveness of civilian victimization.

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Table 1. Cases of Civilian Victimization in Interstate Wars, 1816-2003

War	State	Years	Coercive CV	Eliminationist CV
Franco-Prussian	Prussia	1870-71	X	
Russo-Turkish	Russia	1877-78	X	X
Boxer Rebellion	China	1900	X	
Boxer Rebellion	Russia	1900	X	
Boxer Rebellion*	UK	1900	X	
Boxer Rebellion*	USA	1900	X	
Boxer Rebellion*	France	1900	X	
First Balkan	Serbia	1912-13		X
First Balkan	Bulgaria	1912-13	X	X
First Balkan	Greece	1912-13	X	X
Second Balkan	Serbia	1913		X
Second Balkan	Greece	1913		X
Second Balkan	Bulgaria	1913		X
Second Balkan	Turkey	1913		X
WWI West	Germany	1914-18	X	
WWI West	France	1914-18	X	
WWI West	UK	1914-18	X	
WWI West	USA	1917-18	X	
WWI East	Turkey	1914-18		X
Hungarian*	Romania	1919		X
Greco-Turkish	Greece	1919-22		X
Greco-Turkish	Turkey	1919-22		X
Franco-Turkish*	France	1919-21		X
Franco-Turkish*	Turkey	1919-21		X
Sino-Soviet*	USSR	1929		X
Sino-Japanese	Japan	1931-33	X	
Italo-Ethiopian	Italy	1935-36	X	
Sino-Japanese	Japan	1937-45	X	X
Poland	Germany	1939	X	X
Russo-Finnish*	USSR	1939-40	X	
World War II West	Germany	1940-45	X	
World War II West	UK	1940-45	X	
World War II West	USA	1941-45	X	
German-Yugoslav	Germany	1941	X	
World War II East	Germany	1941-45	X	X
World War II East	USSR	1941-45		X
World War II East	Romania	1941-44		X
Pacific War	USA	1941-45	X	
Palestine	Israel	1948-49		X
Korea	N. Korea	1950-53		X
Korea	S. Korea	1950-53		X
Korea	USA	1950-53	X	
First Vietnamese	USA	1965-73	X	
First Vietnamese	N. Vietnam	1965-73		X
Cyprus	Turkey	1974		X
Cyprus	Cyprus	1974		X
Cambodia-Vietnam	Cambodia	1975-79		X
Uganda-Tanzania	Uganda	1978-79		X
Iran-Iraq	Iran	1980-88	X	
Iran-Iraq	Iraq	1980-88	X	
Lebanon	Israel	1982	X	
Persian Gulf*	Iraq	1991	X	
Armenia-Azerbaijan	Armenia	1992-94		X
Armenia-Azerbaijan	Azerbaijan	1992-94	X	X

Source: Downes 2008, 45-47; * = Borderline Cases

Table 2. Difference in Means for Treatment and Control Groups Before and After Matching

	All Data			Matched Data			Percent Improvement in Balance
	Treated	Control	Difference	Treated	Control	Difference	
Propensity Score	0.357	0.093	0.264	0.357	0.337	0.02	92.25
Attrition	0.903	0.304	0.599	0.903	0.903	0.00	100.00
Military Capability	0.458	0.356	0.102	0.458	0.442	0.016	83.75
Regime Type	0.226	-1.963	2.189	0.226	-0.839	1.065	51.36
Post-1945	0.226	0.313	-0.087	0.226	0.194	0.032	63.04
N	31	214		31	31		

Table 3. Ordinal Logit Analysis of the Effect of Coercive Civilian Victimization on Interstate War Outcomes, 1816-2003 (Dependent Variable is Win, Draw, Lose)

	Baseline Model		Regime Type		Population		Time	
	Full	Matched	Full	Matched	Full	Matched	Full	Matched
	1	2	3	4	5	6	7	8
Coercive CV	0.42	0.38	-0.31	-0.71	-0.58	4.88	4.08***	2.84
	(0.36)	(0.79)	(0.91)	(1.34)	(3.57)	(4.64)	(1.57)	(2.13)
Eliminationist CV	0.75*	0.31	0.83**	0.77	0.73*	-0.16	0.84**	0.27
	(0.43)	(0.65)	(0.42)	(0.63)	(0.42)	(0.62)	(0.37)	(0.64)
Enemy Democracy	-	-	-0.95**	-37.16***	-	-	-	-
			(0.46)	(1.83)				
Coercive CV × Enemy Democracy	-	-	-33.58***	-39.18***	-	-	-	-
			(1.03)	(1.65)				
Enemy Anocracy	-	-	-0.07	-1.12	-	-	-	-
			(0.44)	(1.13)				
Coercive CV × Enemy Anocracy	-	-	2.22*	3.29*	-	-	-	-
			(1.26)	(1.69)				
Enemy Population	-	-	-	-	-0.23	-0.48	-	-
					(0.20)	(0.75)		
Coercive CV × Enemy Population	-	-	-	-	0.23	-0.88	-	-
					(0.72)	(0.96)		
Year Counter	-	-	-	-	-	-	-0.01***	-0.01
							(0.00)	(0.01)
Coercive CV × Year Counter	-	-	-	-	-	-	-0.03**	-0.02
							(0.01)	(0.02)
Material Capabilities	1.86***	-0.60	1.80***	-1.25	1.70***	-1.54	2.04***	-0.35
	(0.60)	(1.12)	(0.65)	(1.46)	(0.61)	(1.11)	(0.59)	(1.13)
Democracy	1.24*	2.48***	1.00	2.06**	1.32*	3.15***	1.34*	2.31***
	(0.73)	(0.74)	(0.68)	(0.92)	(0.76)	(0.85)	(0.69)	(0.89)
War Initiator	0.62	0.65	0.66	0.16	0.62	0.86	0.60	0.78
	(0.43)	(1.00)	(0.46)	(1.19)	(0.44)	(1.04)	(0.44)	(0.99)
Democracy × War Initiator	-0.19	-0.79	-0.35	-0.29	-0.23	-1.29	-0.35	-0.90
	(0.82)	(1.27)	(0.83)	(1.83)	(0.82)	(1.21)	(0.78)	(1.42)
Post-1945	-0.82***	-1.36**	-0.43*	-0.89	-0.81***	-1.73**	-	-
	(0.21)	(0.69)	(0.23)	(1.03)	(0.23)	(0.80)		
N	249	62	246	62	248	62	249	62
Log-Likelihood	-215.84	-48.49	-200.70	-38.96	-214.68	-46.93	-211.59	-48.04
Wald Chi²	33.25***	16.49**	2444.12***	2476.28***	35.27***	19.92**	60.56***	26.61***
Psuedo R²	0.11	0.15	0.16	0.32	0.11	0.18	0.13	0.16

NOTE: Robust standard errors clustered on each war in italics; * p < 0.10, ** p < 0.05, *** p < 0.01

Table 4. Logit Analysis of the Causes of
Eliminationist Civilian Victimization
(First Stage of Instrumental Variables Analysis)

	9
Annexationist Goals	3.19***
	(0.58)
Cultural Differences	1.67***
	(0.57)
Ethnic Intermingling	1.82***
	(0.56)
Previous Victimization	1.82***
	(0.58)
Constant	-5.44***
	(0.73)
N	252
Pseudo R²	0.46
ROC Tab	0.91

NOTE: Robust standard errors clustered on each war in
italics; * p < 0.10, ** p < 0.05, *** p < 0.01

Table 5. Ordinal Logit Analysis of the Effect of Eliminationist Civilian Victimization on Interstate War Outcomes, 1816-2003 (Dependent Variable is Win, Draw, Lose)

	Baseline Model		Regime Type		Population		Time	
	Standard	IV	Standard	IV	Standard	IV	Standard	IV
	10	11	12	13	14	15	16	17
Coercive CV	0.42	0.33	0.42	0.33	0.52	0.50	0.54	0.43
	(0.36)	(0.37)	(0.34)	(0.35)	(0.37)	(0.37)	(0.33)	(0.35)
Eliminationist CV	0.75*	1.92***	0.65	2.47**	3.42	8.03	5.06***	7.39***
	(0.43)	(0.63)	(0.64)	(1.07)	(4.12)	(4.90)	(1.48)	(2.06)
Enemy Democracy	-	-	-1.26***	-0.99**	-	-	-	-
			(0.47)	(0.44)				
Eliminationist CV × Enemy Democracy	-	-	0.34	-2.93	-	-	-	-
			(1.58)	(2.99)				
Enemy Population	-	-	-	-	-0.17	-0.13	-	-
					(0.19)	(0.21)		
Eliminationist CV × Enemy Population	-	-	-	-	-0.62	-1.36	-	-
					(0.94)	(1.06)		
Year Counter	-	-	-	-	-	-	-0.01***	-0.01***
							(0.00)	(0.00)
Eliminationist CV × Year Counter	-	-	-	-	-	-	-0.04***	-0.05***
							(0.01)	(0.02)
Material Capabilities	1.86***	1.89***	1.58***	1.56**	1.71***	1.71***	1.93***	.191***
	(0.60)	(0.60)	(0.63)	(0.63)	(0.61)	(0.60)	(0.60)	(0.59)
Democracy	1.24*	1.23*	1.03	0.99	1.30*	1.27*	1.43*	1.44*
	(0.73)	(0.74)	(0.69)	(0.69)	(0.76)	(0.77)	(0.73)	(0.74)
War Initiator	0.62	0.51	0.70	0.63	0.64	0.56	0.64	0.55
	(0.43)	(0.43)	(0.44)	(0.44)	(0.44)	(0.45)	(0.44)	(0.44)
Democracy × War Initiator	-0.19	-0.19	-0.26	-0.29	-0.22	-0.24	-0.35	-0.37
	(0.82)	(0.81)	(0.82)	(0.81)	(0.84)	(0.83)	(0.81)	(0.82)
Post-1945	-0.82***	-0.69***	-0.48***	-0.34**	-0.84***	-0.70***	-	-
	(0.21)	(0.23)	(0.14)	(0.16)	(0.22)	(0.24)		
N	249	249	249	249	248	248	249	249
Log-Likelihood	-215.84	-213.17	-210.94	-207.10	-214.41	-211.04	-211.49	-208.83
Wald Chi²	33.25***	32.55**	43.26***	36.33***	36.31***	33.09**	43.89***	48.55***
Psuedo R²	0.11	0.12	0.13	0.15	0.12	0.13	0.13	0.14

NOTE: Robust standard errors clustered on each war in italics; * p < 0.10, ** p < 0.05, *** p < 0.01

Figure 1. Effect of Coercive Victimization on Probability of Victory by Enemy Regime Type (Table 3, Models 3 and 4)
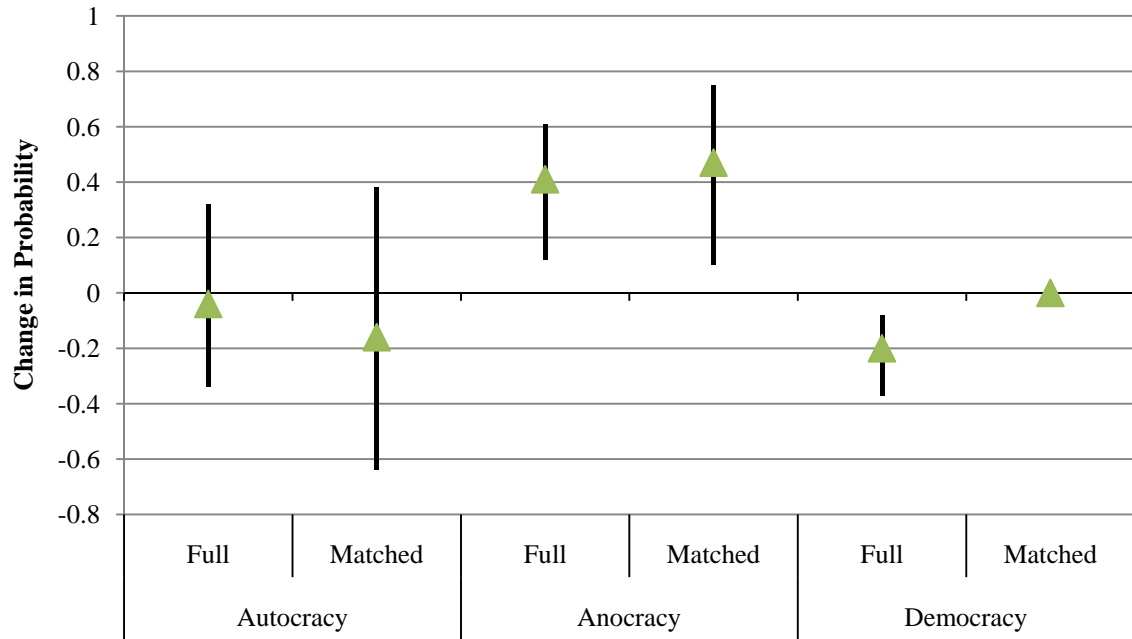
Figure 2. Effect of Coercive Victimization on the Likelihood of Victory over Time (Table 3, Models 7 and 8)
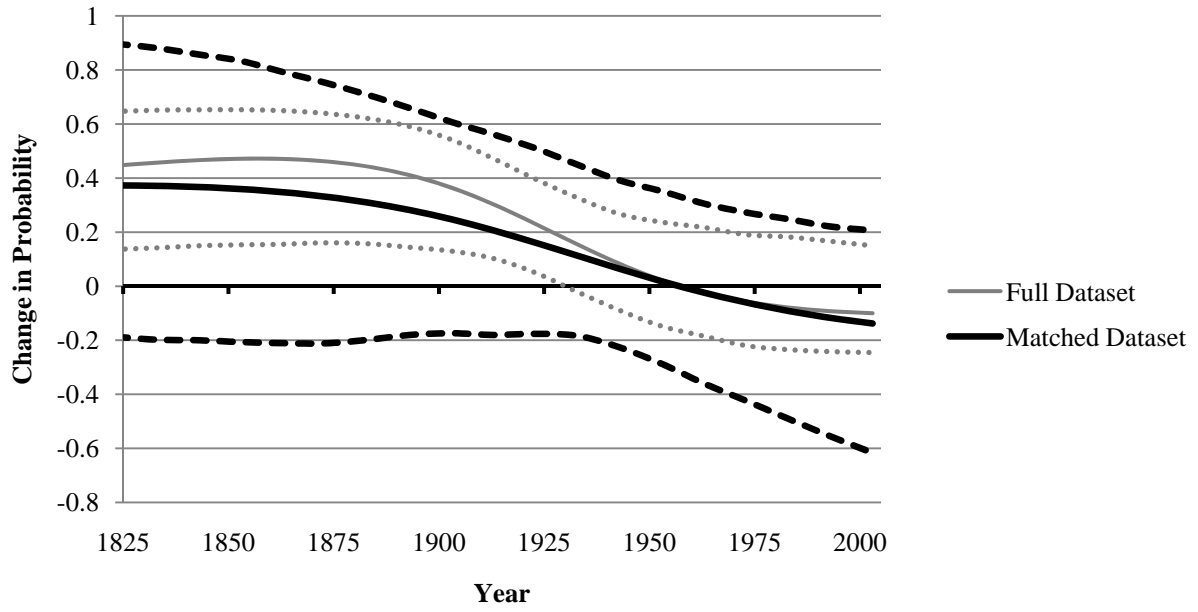
Figure 3. Effect of Eliminationist Victimization on Probability of Victory by Enemy Regime Type (Table 5, Models 12 and 13)
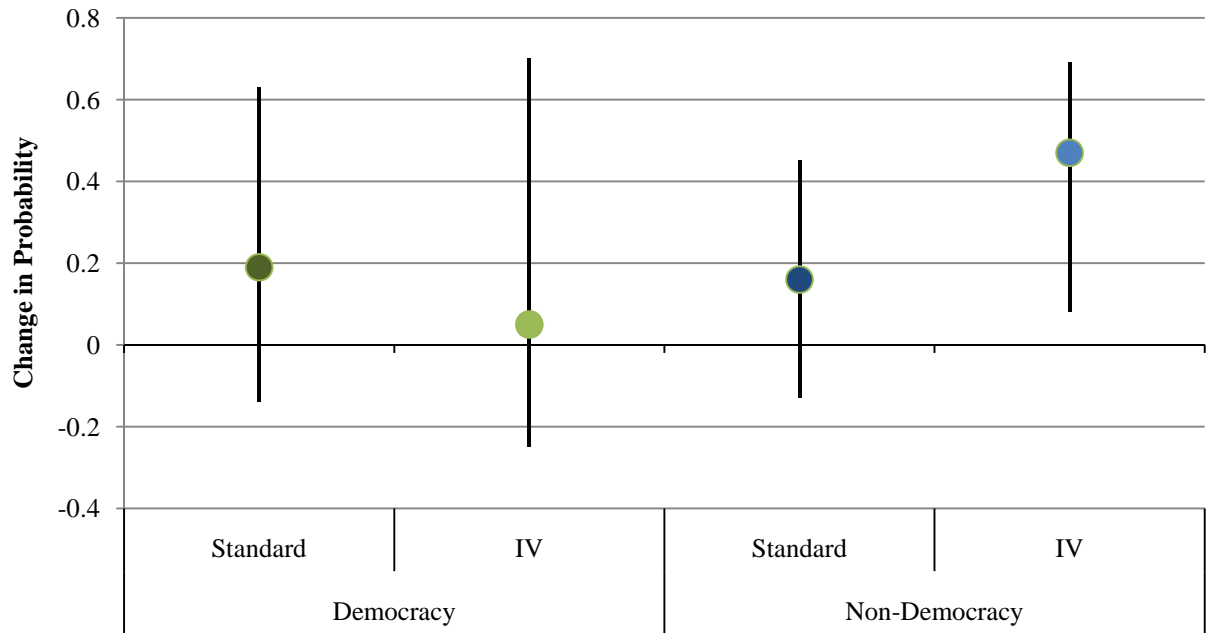
Figure 4. Effect of Eliminationist Victimization on Probability of Victory by
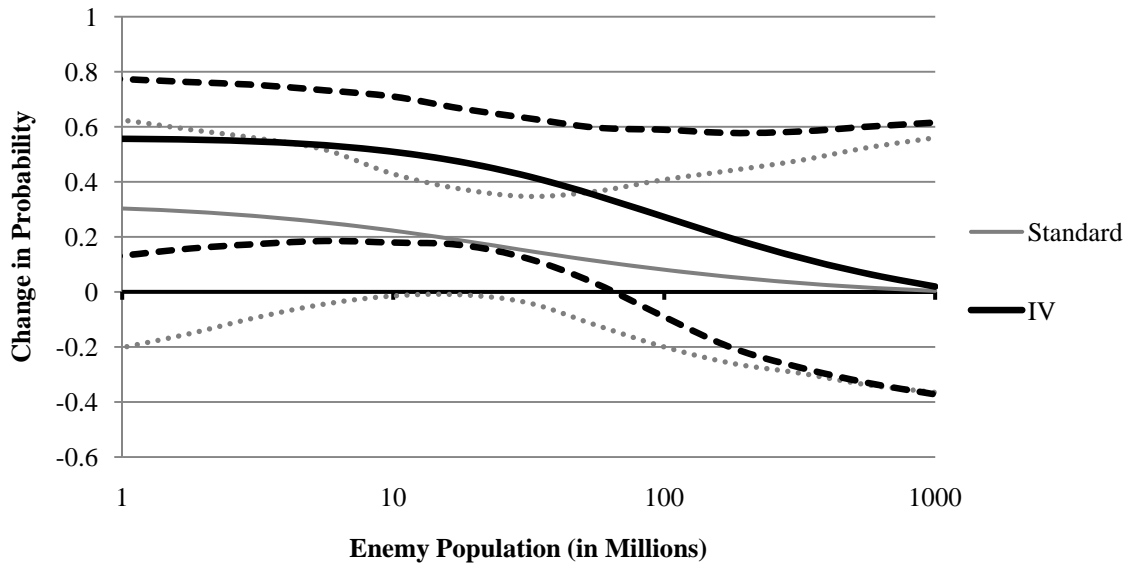Size of Enemy Population (Model 14 and 15)

Figure 5. Effect of Eliminationist Victimization on Probability of Victory over Time (Models 16 and 17)