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State-Making and the Origins of Global Order  
in the Long Nineteenth Century and Beyond

## Preparing for War: Democratic Threat Responsiveness and Military Spending in the Long 19<sup>th</sup> Century

Alexander von Hagen-Jamar

Working Paper Series, 2017:9  
STANCE, Lund University



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# Preparing for War: Democratic Threat Responsiveness and Military Spending in the Long 19<sup>th</sup> Century

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## Abstract

What explains variation in military spending? Conventional wisdom suggests that states arm because of either foreign threats or domestic political institutions. The literature treats these factors as distinct and separate (Nordhaus et. al. 2012, Fordham and Walker 2005, Goldsmith 2003). Less attention is given to how states with different internal constraints respond to similar circumstances. This paper examines how states with different domestic political institutions respond to foreign threat during the Long 19th Century. Democratic states, with leaders who are accountable to a broad public through institutions of competitive elections and mass suffrage, invest in their militaries proportional to the level of foreign threat their state faces. Autocratic states respond less to shifts in the foreign security concerns, suggesting that the purpose of military spending differs in states with and without public accountability.

Why do states spend differently on their military? I argue that democracies are more responsive to their security environment – threats or the lack of threats – than non-democracies, because they have incentives to provide more public goods, including national security. National security, however, is an unusual public good, in that it is present without being explicitly provided by the government when the state is unthreatened. Put differently, national security is free if there are no foreign threats. It is only when there are threats that providing the public good of national security requires investment. Because military spending in democracies is intended primarily to provide the public good of national security, when foreign threat is low, democratic military spending is low. When foreign threat is high, democratic military spending is correspondingly higher, while autocratic military spending remains stable. This shows that, relative to autocratic military spending, democratic military spending is disproportionately intended to provide national security, so it is more responsive to threats to national security.

This article shows that democracies' arming behavior is more responsive to their foreign security environment than non-democracies' arming behavior during the Long 19th Century. Democracies are motivated to arm in order to provide the public good of national security, and they succeed in doing so. Democracies spend less when they are not threatened, but they increase their spending proportional to their threat, unlike non-democracies. Broadly, these findings show that the effects of political institutions go beyond independent, linear effects on phenomena of interest, in contrast to how they are sometimes theorized and modeled. Political institutions condition the effect of other variables on state behavior, and other variables – such as foreign threat – in turn condition the effect of political institutions. More narrowly, these findings reinforce and build on the body of work that shows how democratic states behave differently in foreign affairs than non-democratic states, but challenge arguments about the inherent dovishness of democracies. When not threatened, democracies do spend less on the military. However, when threatened, democracies spend more than their military relative to autocracies.

Two broad explanations for arming exist in the literature on international relations. The first is foreign threat. Governments increase their military spending when they are threatened, and decrease it when they are not (Nordhaus et. al. 2012). Evidence suggests that belief is broadly correct (Goldsmith 2007, Nordhaus et. al. 2012, Dunne et. al. 2007). The second is political institutions. Existing work also

demonstrates that different kinds of states spend different amounts on their military. Specifically, democratic states invest less in their military than non-democratic states, even controlling for threat (Fordham and Walker 2005, Goldsmith 2003, Goldsmith 2007). Both findings, while broadly true, mask an important source of variation: different types of states respond differently to their circumstances. The literature typically treats foreign threat and domestic institutions as separate determinants of military spending, assuming that states respond equally to similar threats to their security (Waltz 1979, Nordhaus et. al. 2012, Fordham and Walker 2005, Goldsmith 2003). Less attention is given to how states with different domestic political institutions perceive and respond to threats differently<sup>1</sup>.

Building on and amending that literature, I show that the effect of the likelihood of conflict is conditional on the domestic political institutions of the state. Democracies invest in their military to build war fighting capacity, leading democratic states to respond more to changes in the likelihood of conflict than non-democratic states. This provides a partial explanation for why democracies succeed more in wartime than authoritarian peers, even when they are the targeted state. Democratic military spending positively changes the military capability of the state more than autocratic military spending.

Political institutions that create public accountability shape how states respond to the foreign threat. Publicly accountable leaders spend more when the risk of conflict is high. This relationship between democratic institutions and threat response explains both why democracies spend less on average than non-democracies, and why some democracies, some of the time, invest heavily in their military.

My argument relies on two premises. First, democracies have more incentive to provide public goods than non-democracies. Second, national security is a public good, but an unusual one. National security does not always require provision by the state to be present. In the absence of threat, the state is secure and therefore does not need to increase its military spending in order to provide national security. More realistically, when foreign threat is low or accounted for via alternative

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<sup>1</sup> There are some notable exceptions. Narizny (2003), for example, examines how government ideology explains shows that conservative governments in the United States, France, and the United Kingdom are more likely to turn to alliances than arms, relative to leftist governments, when faced with rising international threat.

means (alliances, for example), military spending is not necessary to provide it. I argue that this implies that democratic states will adjust their military spending in response to foreign threats more than non-democratic states. Their military spending (and, I expect broader foreign policy though that is beyond the scope of this paper) is more responsive to their environment, because of the incentive to provide the public good of security, which may be provided in other ways, or be present with relatively low levels of spending (when threat is low). The relevant hypothesis is a straightforward conditional relationship, testable with a model of military spending that includes an interaction between regime type and external threat.

## Review of the Literature

Military spending is a response to foreign threats. That contention exists in the realist literature (Waltz 1979, Walt 1990), is the basis for the considerable body of work on arms races (Richardson 1960, Glaser 2000, Morrow 1993), and has been subject to recent empirical evaluation (Nordhaus et. al. 2012, Goldsmith 2003, Dunne et. al. 2007, Rosh 1988). The military provides security by increasing the capacity of the state to use violence to inflict costs, and preventing costs from violence, either through deterrence or direct prevention. What is considered a threat varies widely across the literature.

Broadly, the common understanding of a threat is an actor who possesses the ability and intention to harm the interests of the state. These different understandings of threat vary across other dimensions, however. Some are directly tied to conflict (Bueno de Mesquita 1981, Nordhaus et. al. 2012), while others focus more on both hot and cold strategic competition (Colaresi et. al. 2008). Waltz focused primarily on the causes and effects of power. An important amendment to Waltz's argument came from Walt (1990), who argued that states do not balance (through alliances) against only power. They do it against power that is perceived as having hostile intent. Rosh (1988) introduced the idea of a security web on which state military spending and foreign policies more generally might depend. The security web, or security environment, is a familiar concept in international relations, which spans multiple levels of analysis, including both the systemic and dyadic levels. When defining the foreign security environment, I focus on the concept



of threat, with an eye to these to central formulations. Threat is some combination of the capacity to harm, and the desire, willingness, and likelihood of doing so. The relative importance of each, however the emphasis of capacity versus intent may vary across state types.

## Domestic Institutions and Arming

Democratic institutions affect a variety of international phenomena and foreign policies, including conflict occurrence, behavior, and outcomes. Work on democratic institutions and foreign affairs intersects with the arming literature when it dwells on how political institutions affect military spending, in and out of wartime. One consistent finding is that democracies spend less on their military (Goldsmith 2003). In many empirical evaluations, that manifests as increases in Polity or a related measure being associated with decreases in a measure of aggregate spending (absolute or relative to GDP). Fordham and Walker (2005) directly investigate the pacifying effect of democracy, and find, in concordance with Kantian liberal theory, democracy leads to less military spending. In their investigation of external security environment and military spending, Nordhaus, Oneal, and Russett (2012) find that external threat does increase military spending. In the process, they also find that, consistent with Fordham and Walker, democracy decreases military spending. Further, they find that democracy has the secondary effect of reducing threat by making conflict less likely with some states, which in turn reduces military spending.

Bueno de Mesquita et. al.'s (2003) selectorate theory emphasizes the importance of the size of the winning coalition, particularly relative to the body of actors who could help form a winning coalition (the selectorate). Leaders with large winning coalitions have two incentives to provide national security. First, national security is a public good (Dunne et al. 2007, Sandler and Hartley 1995, Smith 1995) it is not exclusive or rival among the domestic population. Large winning coalition leaders provide more public goods because providing private goods to buy support is inefficient with a large coalition. As a result, large winning coalition leaders should be more likely to provide national security because their accountability to the public requires public goods. Importantly, those same governments are likely to provide more of other public goods as well, and there may be substitution effects. My argument, outlined more fully below, builds on Bueno de Mesquita et

als (2003). In times of low threat, national security is already provided, and investments in defense have small returns. I hypothesize that large winning coalition leaders invest in national security when the country is otherwise insecure, and invest in other public goods when it is relatively secure, because they are subject to public accountability.

Scholars like Lake and others argue that democracies should try harder during war (Lake 1992, Bueno de Mesquita et. al. 2003) for a variety of reasons. However, Reiter and Stam (2002) find no evidence that democracies are better at extracting resources for war. Goldsmith (2007) finds evidence that democracies do try harder. Scholars have provided a variety of explanations for the observed correspondence between lower military spending and democracy, and more spending by democracies during wartime. For example, Goldsmith tries to arbitrate between three: executive constraints, large winning coalitions or political participation, and political competition. He argues that political competition is the primary reason that democracies spend less during peacetime but more during times of war. In particular, competition leads to flexibility in defense effort. His principal foil is the selectorate theory, which argues that as the group which is required to maintain the winning coalition necessary to stay in power increases in size, so does the incentive of the leader to provide public goods, rather than private goods (Bueno de Mesquita et. al. 2003). Goldsmith agrees with the finding, but disagrees with the mechanism – political competition rather than large winning coalitions (2007).

These and related works address how democracies respond to *war* rather than more general responses to threat – arms races and similar dynamics are outside of the scope of their work. A substantial body of work on war treats war as a bargaining process, with actual military action being part of a more general process, rather than a wholly distinct enterprise (Wagner 2000, Blainey 1976). Arming is also a part of that process – the provision of security through policy, or the acquisition of goods through bargaining with other states. This is consistent with formal models that include arming or arms races as part of a game, in which one possible outcome is war (Powell 1999).

## Argument

I extend the “democracies try harder” argument to non-wartime arming. Leaders who answer to large groups will distribute more public goods and favor policies whose benefits are widely dispersed (Bueno de Mesquita et al. 2003). National security is a public good, as it is neither rival nor excludable. However, it is only one of a range of public goods that a leader can provide. While democratic leaders — those that are accountable to a public — have an incentive to provide more public goods on the whole, that does not necessarily mean they will provide more of any particular public good. Given finite resources, the leader will try to provide some mix of public goods that optimizes her likelihood of remaining in power. National security, unlike many other public goods, is sometimes present without it being provided. When the country is unthreatened, an intervention by the state to provide security is unnecessary. As a result, democratic leaders provide other public goods, such as a welfare state, public education, or lower taxes, when threat is low. As threat increases, they will shift funds to national security. The incentive to provide public goods created by leader accountability to a large public leads to democratic states being particularly responsive to threat.<sup>2</sup> If they are secure already, spending on the military to increase national security will be inefficient. It would not make sense for a leader to provide a public good — military spending, in this case — for which there is little need. Their incentive to provide it is contingent on the circumstances of the state — whether it is under threat or not. Rather than just exerting upward force on military spending (as a public good), public accountability shapes how the government responds to its security situation, which can increase or diminish demand for that particular public good. This argument is consistent with the literature on democracies and war — even under identical circumstances, states with different regimes respond differently. I argue that this dynamic is at work even in times of peace — democracies respond to their security environment more than non-democracies. While there may be an independent effect of democratic institutions (general pacification, for

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<sup>2</sup> Note here that I am not arguing that this is always the appropriate amount. As Ethan Bueno de Mesquita shows (2007), democratic leaders may have incentives to overprovide visible policies to counter security threats, even if invisible (to the public) policies would be more effective.

example), they also shape how governments respond to their environment. If they are not secure, they will invest in their military or otherwise increase their security. Politicians subject to political accountability, then, are particularly sensitive to foreign threats to their security. Democratic leaders will invest more in preparation for conflict when their foreign security environment is more dangerous.

### Hypothesis

*Military spending in democratic states will have a more positive correlation with foreign security environment than military spending in non-democratic states.*

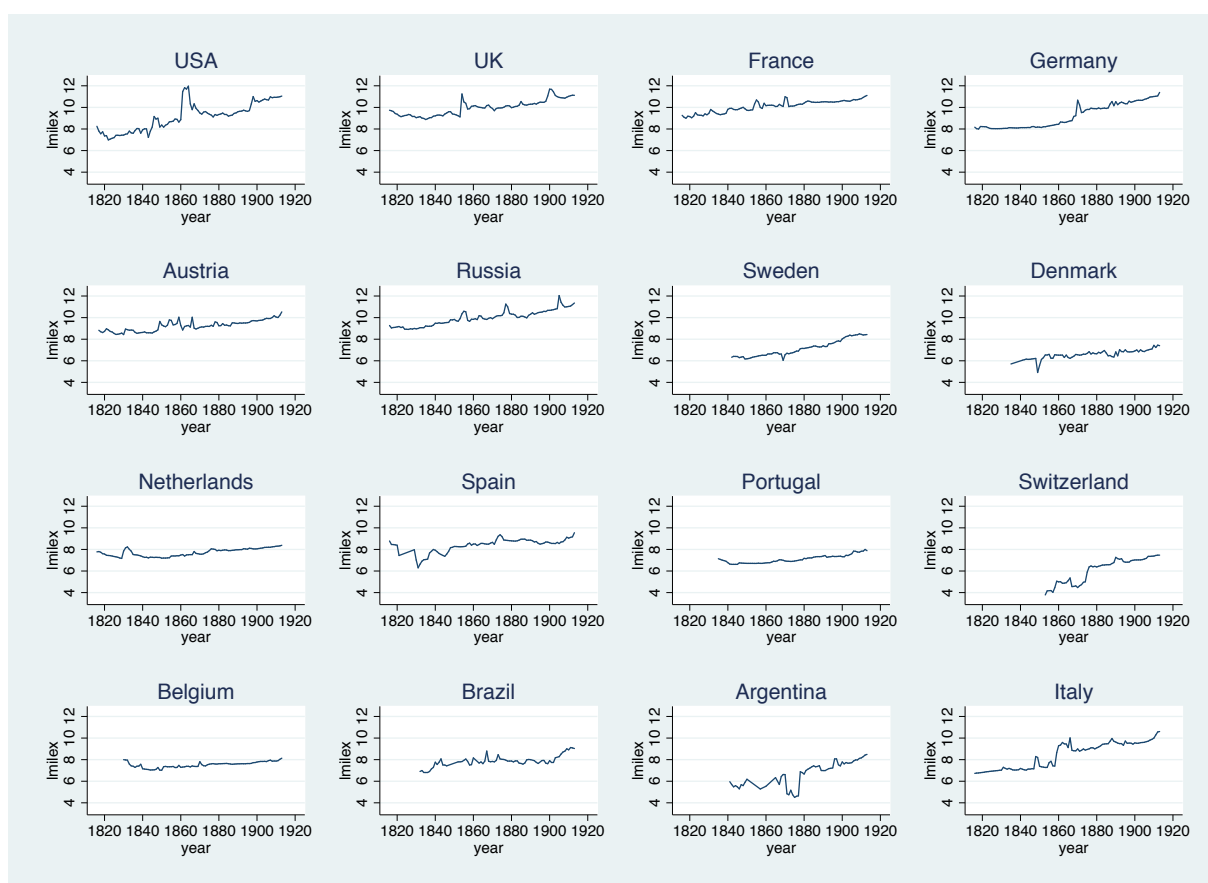
Why, then, do some autocracies invest heavily in their militaries? Autocratic leaders answer to smaller groups, and so have less incentive to provide public goods compared to private goods, relative to democratic leaders. As a result, they eschew public goods for private ones. If my argument is correct, that suggests that their spending is driven by concerns other than national security. For example, they may use military spending as a side-payment to military elites in exchange for political support. For my purposes, that implies that while autocracies may have high (or low) levels of military spending, their military spending will not be as responsive as democracies to their external threat environment.

## Military Spending in the 19<sup>th</sup> Century

The long 19th century is an understudied period in political science, but a crucial one for evaluating questions of foreign policy. The international system during the long 19th century is distinct from the interwar period, the Cold War and the post-Cold War periods. While data availability and measurement error are a challenge when studying the long 19th century, the benefit is that it expands the scope conditions of theories that are universal, but tested only on more recent data, like much of the work on military spending. Including it in such tests is valuable as a test of universality, but neglects the specific characteristics of the long 19th century that make it interesting and distinct from later periods, including its relative peace between European states and the dramatic development of the state itself over that time period. Further, in the Cold War and Post-Cold War periods, security policies are

dominated by the politics of military alliances, which often substitute for military spending. While we have made progress on disentangling the multiple effects of alliances on military spending, there is a benefit to studying the pre-NATO period.

The long 19th century is also a period of steady (considerable) increases in military spending across most, if not all, sovereign states. Figure 1 below presents the logged military spending of 16 of the countries for whom we have data over most of the period. Increases in military spending in some smaller European states, like the Netherlands, Belgium, and Portugal stand out as unusual amongst persistent increases over the time period in most other countries.



## Research Design

An evaluation of the relationship between regime type and threat response requires variation in spending and threat across countries with different regime types, and variation in spending and threat within countries, over time. Dunne and Smith have an excellent review of the

specification challenges posed by arms race dynamics (Dunne and Smith 2007). While not by any means alleviating all of the various difficulties, time series cross sectional (TSCS) data is used in most recent empirical work on aggregate military spending (Collier and Hoeffler 2007, Fordham and Walker 2005, Nordhaus et al 2012). I follow those scholars and use country year data from 1951-1999, excluding years where the state was involved in an interstate war, to estimate a series of multivariate regression models evaluating my hypotheses. I provide estimates from a variety of alternative specifications to demonstrate the robustness of my findings in an appendix.

## Measurement and Variable Selection

### *DV: Military Spending*

I use TSCS data of military spending as a percentage of estimated GDP (Fordham and Walker 2005) and logged military expenditures (Correlates of War CITE) from 1816-1913. Military spending as a percentage of GDP captures the quantity of the resources available to society that are dedicated by the state to the military. Unfortunately, there are not direct measures of GDP for the long 19th century. Accordingly, following Fordham and Walker, I use estimated GDP<sup>3</sup> to calculate the dependent variable. While military spending as a percentage of GDP is easy to understand, and reflects how much of itself the state dedicates to military power (Fordham and Walker 2005), absolute changes in spending are also important when considering the influence of international threats: 1% of GDP is not the same everywhere. Each dollar spent is also not equal. A reasonable assumption is that of diminishing marginal returns per dollar, so larger numbers of dollars are required to improve security as total spending increases. I approximate that dynamic by using the natural log of military spending, with data from the Correlates of War project; this follows the usage in Nordhaus et al. (2012) in their investigation of the relationship between external threat and military spending (2012).

### *IV: Foreign Threat*

What is considered a threat varies widely across the literature. Broadly, the common understanding of a threat is an actor who possesses the

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<sup>3</sup> See Fordham and Walker for a full explanation (2005).

ability and intention to harm the interests of the state. These different understandings of threat vary across other dimensions, however. Some are directly tied to conflict (Bueno de Mesquita 1981, Nordhaus et. al. 2012), while others focus more on both hot and cold strategic competition (Colaresi et. al. 2008). Waltz focused primarily on the causes and effects of power. An important amendment to Waltz's argument came from Walt (1990), who argued that states do not balance (through alliances) against only power. They do it against power that is perceived as having hostile intent. Rosh (1988) introduced the idea of a security web on which state military spending and foreign policies more generally might depend. The security web, or security environment, is a familiar concept in international relations, which spans multiple levels of analysis, including both the systemic and dyadic levels. When defining the foreign security environment, I focus on the concept of threat, with an eye to these to central formulations. Threat is some combination of the capacity to harm, and the desire, willingness, and likelihood of doing so. The relative importance of each, however the emphasis of capacity versus intent may vary across state types.

To capture this diversity, I use two measures of threat as IVs. Both emphasize intent, but their construction and accordant strengths and weaknesses differ in important ways. The first measure, the summed capability of rivals, combines capacity and intent explicitly.

The second measure is a construct similar to the measure used by Nordhaus et. al. (2012). It is an estimate, using a standard model of conflict propensity (Bennett and Stam 2003), of the expected number of militarized interstate disputes in a year. This measure proxies for the state's estimate of how much conflict it will face that year, assuming it has the same or similar information to what is used by the model. Further explanation of how it is estimated is available in the appendix.

#### *IV: Regime Type*

I argue that both mass suffrage and high levels of political competition are necessary for public accountability to affect threat responsiveness. Among the variety of possible measures of regime type, Boix et al.'s dichotomous coding of democracy (2013) most closely captures the institutions I argue drive public accountability. This measure evaluates countries based on their suffrage and political competition, coding states with high levels of both as democracies, and the remainder as non-democracies. This captures my argument well because it incorporates accountability, through political competition, and the relative efficiency

of public goods, as mass suffrage creates a large selectorate and requires a large winning coalition (when paired with political competition). It also means this measure excludes other institutions associated with democracy but not relevant to my argument.

Two other standard measures are Polity (Marshall, Jaggers & Gurr 2009), which is often used to represent variation in regime type, and W, from Bueno de Mesquita et. al. (2003), which measures the size of the winning coalition needed by the leader to remain in power. Polity is a scale from -10 to 10, and is constructed from measures of various institutional characteristics associated with democracy and autocracy. Polity captures a collection of institutions beyond mass suffrage and political competition that do not apply to my theory. Bueno de Mesquita's W adopts 5 values, from 0 to 4, and is closer theoretically to my causal story than Polity, but not as clean a fit as the Boix et. al. measure, as W emphasizes executive constraints, rather than specifically high levels of public involvement and meaningful political competition. The results presented below do not change substantially if Polity or W is used in lieu of Boix et. al.'s measure (2013). (Results in the appendix, with more extended tests available on request.) Results for models using Polity and W<sup>4</sup> are available in the appendix.

### *Control Variables*

The initial models presented include few control variables, but the findings are robust to the inclusion of many others. Each model includes the natural log of real GDP,<sup>5</sup> the natural log of total population, the combined *cinc* scores of allied states, and whether the state itself is a major power at the time.

## Estimation Strategy

Time series cross-sectional data can exhibit numerous problems to effective estimation, including unit heterogeneity, temporal autocorrelation, spatial autocorrelation, and heteroskedasticity. I use a

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<sup>4</sup> I also evaluated the model using the measure of W over S from Bueno de Mesquita et al.'s (2002) replication data, as some argue that is the better measure for capturing tendency to provide public goods. There is no substantive difference in the results.

<sup>5</sup> I again use Nordhaus et. al.'s data (2012), and refer the reader to their article for a discussion of its construction.



variety of different models to address these concerns in turn, though no model individually addresses all possible problems. In the body of the paper, I present models using panel corrected standard errors, a lagged dependent variable, and fixed effects. In the appendix, I present results from a range of different error modeling specifications<sup>6</sup>; the core findings remain robust across these specifications.

#### *Unit Heterogeneity*

Fixed effects may attenuate coefficient estimates on variables that change slowly over time but vary considerably across units, but excluding fixed effects risks omitted variable bias from unmodeled unit heterogeneity. The models in the body of the paper include fixed effects, with models absent fixed effects available in the appendix. In the appendix I present estimates from two models with fixed effects, with Newey West (Newey and West 1987) and Driscoll Kraay standard errors (Driscoll and Kraay 1998).

#### *Temporal Autocorrelation*

Military spending is sticky over time. What a country spent last year is a good predictor of what it will spend this year. That temporal dependence could be a result of slow moving independent variables, both within-unit and external: balance of power and international threat dynamics change slowly. It could be part of the nature of military spending – investment in weapons systems takes place over years, so the actual process is not yearly, even if the data is. Finally, it could be a product of bureaucratic dynamics that make changing the budget difficult. Institutional characteristics may make deviations from status quo spending difficult. Most likely, the observed temporal dependence is a product of all of these<sup>7</sup>.

One common solution for temporal autocorrelation is to use a lagged dependent variable (LDV). The use of a lagged dependent variable, however, can also cause problems, particularly in data with slow moving independent variables (Achen 2000). Estimated coefficients on variables like foreign threat, which are highly correlated over time, are likely to be

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<sup>6</sup> The appendix include models that address temporal autocorrelation in a variety of fashions, unit heterogeneity via fixed effects, alternative measures of political institutions (Polity and W), and an alternative measure of the dependent variable (military spending as a percentage of GDP).

<sup>7</sup> Addressing which and to what degree is outside of the scope of this article.

attenuated when lagged military spending is included in the model.<sup>8</sup> However, there are also substantive reasons to include a lagged dependent variable in models of military spending, such as the bureaucratic argument mentioned above. Temporal autocorrelation might be a result of a causal process between military spending and the previous year's military spending, as well as being a result of processes that are, in this case, nuisances. The models in the body of the paper all include a lagged dependent variable<sup>9</sup>.

#### *Heteroskedasticity and Spatial Disturbances*

I use regression with panel corrected standard errors to account for heteroskedasticity and temporal autocorrelation in the disturbances. In the appendix, I also use models with Driscoll-Kraay standard errors, with and without fixed effects, to account for general temporal and spatial autocorrelation, heteroskedasticity, and unit-level heterogeneity (Hoechle 2007).

## VI Analysis

Table 1 presents estimates from models with logged military spending and military spending as a percentage of GDP as dependent variables. In each model, democracy is interacted with interstate war, rival capabilities, and expected conflict, to evaluate the differential effect of foreign security environment on military spending. Figures 2 and 3 present the marginal effects of rival capabilities and expected conflict in democracies and non-democracies in each model.

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<sup>8</sup> Achen (2000) discusses work on arms races as an exemplar of this danger.

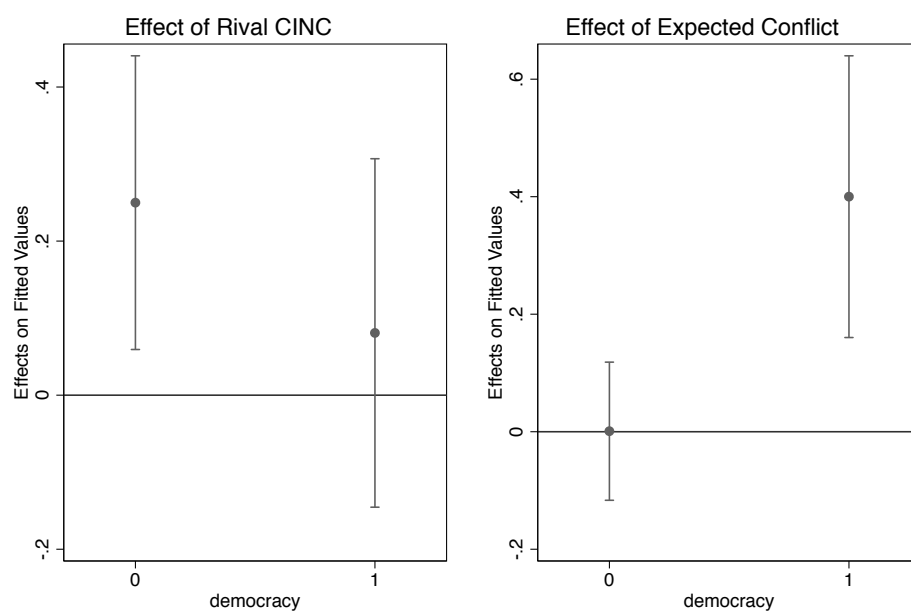
<sup>9</sup> In the appendix, I address temporal autocorrelation in three additional ways: with standard errors that are robust to temporal autocorrelation in the disturbances (Newey West and Driscoll-Kraay); with the direct inclusion of a lagged dependent variable in a Newey-West model; and with a model that instruments for the lagged dependent variable with lagged independent variables, as used by Nordhaus, Oneal, and Russett (2012) and Conrad, Kim, and Souva (2013).

Table 1

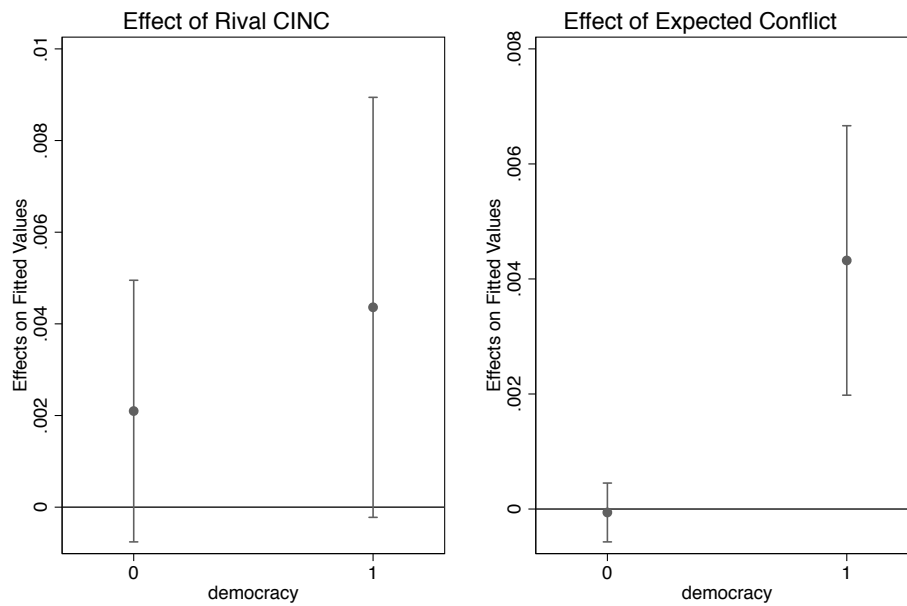
| Models with LDV, FE, PCSE      | Logged Military Spending   | Military Spending as a Percentage of GDP |
|--------------------------------|----------------------------|--|
| Lagged DV                      | 0.851***<br>(0.02)         | 0.521***<br>(0.07)                       |
| Democracy                      | <b>0.089</b> **<br>(0.03)  | 0.000<br>(0.00)                          |
| Interstate War                 | <b>0.206</b> ***<br>(0.03) | <b>0.002</b> ***<br>(0.00)               |
| Democracy X Interstate War     | 0.117<br>(0.08)            | 0.000<br>(0.00)                          |
| Total Population               | 0.000***<br>(0.00)         | 0.000***<br>(0.00)                       |
| Logged GDP (Estimated)         | 0.060**<br>(0.02)          | -0.002***<br>(0.00)                      |
| Rival Capabilities             | <b>0.250</b> *<br>(0.10)   | 0.002<br>(0.00)                          |
| Democracy X Rival Capabilities | <b>-0.169</b> *<br>(0.08)  | 0.002<br>(0.00)                          |
| Allied Capabilities            | -0.001<br>(0.06)           | 0.000<br>(0.00)                          |
| Major Power                    | 0.099<br>(0.09)            | -0.000<br>(0.00)                         |
| Expected Conflict              | 0.001<br>(0.06)            | -0.000<br>(0.00)                         |
| Democracy X Expected Conflict  | <b>0.399</b> **<br>(0.13)  | <b>0.004</b> ***<br>(0.00)               |
| Constant                       | 0.028<br>(0.32)            | 0.032***<br>(0.01)                       |
| Observations                   | 1795                       | 1794                                     |

†  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## Logged Military Spending



## Military Spending as a Percentage of GDP



In the model of logged military spending, the effect of rival capabilities is only positive and statistically significant for non-democracies. It decreases, and the standard error bars include 0, for democracies. In contrast, the effect of expected conflict is statistically indistinguishable from zero for non-democracies, but positive and significant for democracies. Democracies, it appears, invest in response to expected levels of conflict, but not the relative power of their strategic rivals. Non-democracies do the opposite, according to this model. Interestingly, the coefficient on democracy, absent any foreign threat, is positive in the model for logged military spending, even with fixed effects and a lagged dependent variable included. Effectively, democracy appears to increase absolute levels of military spending in this period, opposite from what has been found in previous investigations of the relationship between military spending and democracy (Fordham and Walker 2005, Nordhaus 2012). That may be because of unaccounted for development in democracies vs non-democracies (increases in state capacity, for example), rather than a specific causal effect of democracy itself. Interstate war unsurprisingly increases military spending, but not more in democracies than non-democracies, in contrast to the findings in Goldsmith (2007).

In the models of military spending as a percentage of GDP, we find no significant effect for the summed capabilities of rivals. Though it is interesting that democracy appears to increase the coefficient size, it

never achieves statistical significance. On the other hand, expected conflict again conforms with the expectation that democracies will invest more in their military in response to foreign threat. The coefficient for expected conflict is positive and significant for democracies, and effectively zero for non-democracies. There is no observed effect for democracies absent foreign threat

## Discussion

In democracies, domestic politics do not, in and of themselves, determine foreign policy. They shape how governments respond to their security environment. Democratic states invest more in their militaries in response to likely conflict than non-democracies. These findings update the literature in a number of ways. First, I show that democracy only has a dampening effect on aggregate military spending when conflict is unlikely. The argument that democracy is pacifying requires, at least in the context of military spending, a significant caveat. Far from being naturally more pacific, democracies arm more when conflict appears likely, even as they spend less when not threatened. They adapt more to the probability of conflict than other states. While some literature suggests that democracies do try harder during war, as argued by Bueno de Mesquita et al., (2003) and Goldsmith (2007), I find that their increased effort by democracies extends to likelihood of conflict, even in times of peace. This is in keeping with the insights of Clausewitz, and more recently Wagner (2000) and others. War is an extension of politics, rather than a wholly distinct process. I argue that it is specifically public accountability that drives democracy's effect on military spending. Public accountability causes democratic leaders to be more sensitive to the costs of war, and therefore more responsive to the expected level of conflict. It may be that the null effect for rival capabilities in democracies is a result of this concern about the cost of war. Democratic leaders will be most concerned with those policies and consequences that are most publicly visible. The most visible manifestation of national insecurity is losing open conflict. While the public may not be aware of subtle shifts in the geopolitical circumstances of the state, it will notice if war breaks out. Democratic leaders may also be responsive to other kinds of threats, but no strategic competition has as significant and well-documented political costs as those associated with military conflict. Nor, generally, are other

types of threats as visible to the public. Arms races may receive some political attention, but nothing receives the same attention as, and as a result, threatens the position of political elites like, fatal militarized disputes. The likelihood of conflict instigates military spending on the part of leaders subject to public accountability because when conflict breaks out, the public knows it.

My findings show that, as suggested by the effects shown in Figures 2 and 3, democratic military spending is closely related to the security environment, particularly the expected conflict. To understand the importance of regime characteristics to foreign policy, future work needs to account for the interaction of the institutions of the state with the environment of the state.

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