

## **A Theory of Conscription: Loyalty, Threats, and Labor Markets**

### **Abstract**

Literatures on nationalism and on how states prepare for war overemphasize the link between ideological motivations and military service. The argument I propose builds on rational choice theories of collective action. It specifies the determinants of both governments' demand for conscription and of populations' likely response to different enlistment schemes (i.e., conscription or a professional army). I also provide original large n findings.

The demand for conscription and large armies is driven by a country's international threat environment, which is partly geographically determined. An individual's decision to enlist is primarily driven by selective incentives. The form of selective incentives the state can effectively provide is a function of its political and economic institutions. Regime type shapes the strength of domestic political limits on coercing one's citizens. Dictatorships are better positioned than democracies to restrict both major forms of resistance to conscription: political activity and emigration. The extent of labor market regulation determines how responsive the population is to market incentives in deciding whether to enlist.

Ideological motivations such as nationalism, commitment to democracy and/or egalitarian ideals are neither necessary nor primary causes of conscription. In fact, democracy leads to less conscription. The relationship between nationalism and conscription is positive but weak, which suggests that nationalists primarily act strategically rather than morally or emotionally in pursuit of their goals.

The results of econometric cross-national testing using data from between 1990 and 2000 are consistent with the claims above. Extending econometric testing to the 1850-2000 period produces similar results.

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## I. Introduction

We should study military manpower policy choices (i.e., conscription or a professional army) because they affect military preparedness as well as how the burdens of military service and war are distributed among the population. Via conscription, the state can make one of its most extreme demands: that its citizens engage in combat and risk their lives. In addition to being important, conscription is widespread. In the 1990s, more than half of countries in the world used it in order to recruit at least some of their military personnel.

The arguments in the literature on conscription can be divided into four categories: efficiency, geopolitical, ideological, and domestic political. I will begin with a brief description of each category and of how this paper relates to it.

Arguments stressing ideology usually link conscription with either commitment to democratic institutions and egalitarian values or with nationalism and ethnic homogeneity. I argue that scholars overreach when they claim that ideological factors are a necessary cause (Posen, 1993), primary determinant (Leander, 2004) or of equal importance as geopolitical factors (Cohen, 1985) in explaining conscription and the raising of mass armies. Furthermore, the linking of democracy with more conscription (Levi, 1997, Dolmas, 2004) results in empirical predictions that I argue are the opposite of the actual pattern. Finally, the literature often does not do enough to distinguish between different causal mechanisms linking ideology and conscription.

Economists often use arguments that stress efficiency to explain conscription. A notable claim is that the choice between a professional army and conscription involves tradeoffs between deadweight costs of taxation (the downside of the professional army) and the loss of selection effects (the downside of conscription) (an overview of these arguments is available in Mulligan and Schleifer, 2005). Recent work by Casey Mulligan and Andrei Schleifer (2005) shifts the focus on factors that affect the fixed costs of conscription. I build on their insight that conscription is a regulatory policy that is related to other regulatory policies. However, the causal logic which I propose differs from theirs and introduces a more direct causal link.

Geopolitical arguments assert that conscription is a means states use to respond to interstate threats and opportunities. Eliot Cohen (1985) and John Mearsheimer (2001)

link security policy choices with attributes of geographic locations of states. My work seeks to make a contribution in this area by providing original large n empirical testing.

Domestic political arguments focus on the distributional consequence of conscription. One example is Dolmas' (2004) claim that arming the masses makes them difficult to repress. These arguments often fail to explicitly identify the key actors and to state their preferences. In this paper I develop an argument that stresses both the interests of the state and the role of domestic institutions that shape the popular response to conscription and constrain military manpower choices of states. I claim that actors' decisions are best understood by using rational choice assumptions.

In brief my argument is as follows. The demand for conscription is driven primarily by the threat of interstate war. The international threat environment is partly a function of a country's geographic location. Countries with numerous land borders are more likely to have conscription than countries with few land borders. That is the case because invasion, in either direction, is most likely across a land border. Conscription allows countries in volatile locations to build up large standing armies and establish a reserve of former conscripts who can be rapidly mobilized when needed.

Potential recruits decide whether to enlist primarily based on whether the selective incentives (positive or negative) to enlist outweigh the risks and the opportunity cost of military service. Whether a state is better positioned to rely on coercive selective incentives (conscription) or pecuniary ones (a professional army) is a function of the nature of its domestic institutional constraints. The key economic institutional constraint is the structure of the labor market. Countries with heavily regulated labor markets are more likely to choose conscription over a professional army because it is more difficult for their population to shift careers (including to and from the military) using market mechanisms.

The key political institutional constraint is regime type. Dictatorships have more conscription than democracies for two reasons: they have a comparative advantage in coercion and they have a demand for larger armies. Dictatorships are better able to repress the opponents of conscription. They are also better positioned to prevent emigration motivated by evading conscription. Further explanatory power is gained by disaggregating dictatorships. First, the effect of regime type variation on conscription

may not be fully linear. The transition from mixed systems which are predominantly democratic to mixed systems which are predominantly authoritarian may not produce the same increase in conscription as the transition from mixed systems to pure dictatorships. Weak dictatorships may lack the repressive apparatus needed to repress soldiers. Second, communist countries have more conscription than even the other dictatorships because they combine authoritarianism with heavy labor market regulation with the propensity for emigration restrictions. Third, wealthy rentier states have less conscription because they can use their wealth to find alternative means to build military power.

The arguments linking ideological motivations and conscription suffer from three weaknesses. First, they often fail to explicitly specify the relevant causal mechanisms. This results in several important problems. For example, in some cases because the assumed nature of the actors (e.g., whether they are primarily rational and self-interested or moral) is not specified it is not clear whether the logic should dictate that the key explanatory variable leads to more or to less conscription. Second, some arguments stress moral duty as the key pillar supporting conscription. The assumption is that it is the duty to comply with conscription that matters, rather than the more straight-forward concept of the duty to enlist and fight for one's country. In other words, if the potential soldiers are driven by duty, than why is conscription necessary at all? These arguments also fail to adequately explain how this sense of duty is generated. Third, some arguments stress the commitment to one's country's war aims as the key explanatory variable. They tend to fail to appreciate the importance of the collective action problem.

In the next two sections I state my theoretical claims in more detail. The testing section presents the econometric results. The final section concludes.

## **II. The State, Borders, and War**

The key claim of this section is that the state seeks conscription primarily in order to prevail in interstate conflicts. That claim builds on the following assumptions.

The primary goal of any state is survival. Because the interstate system is predominantly anarchic, states need to provide for their own security. An important means of doing so is by building up one's military forces. Adopting conscription or increasing the required term of service are means through which the size of the military

can be increased. I will proceed by defining conscription and explaining how it is related to the size of the military.

Conscription is a legal obligation for persons from a certain demographic to perform military service. In practice this obligation is usually imposed on young men. Those who fail to comply face penalties such as imprisonment. When a conscription system is in place, a sizeable fraction of a country's male population receives military training over a period that is usually not much less than a year. Purely conscript armies do not exist. Conscript armies need career officers to train the conscripts, and some militaries rely on both conscripts and professional soldiers for their personnel.

When a country has a purely professional army there is no legal obligation to serve. Officers and soldiers are offered competitive salaries and/or other incentives to join the military.

The first important distinction between a conscript and a professional army is the form of selective incentives used for recruitment. Conscription relies on coercion: a negative selective incentive imposed on defection. A professional army relies to an important degree on pecuniary incentives, such as a salary and an enlistment bonus. I will return to this distinction in more detail in the section on selective incentives and the popular response to conscription.

The second distinction between conscription and a professional army is that conscription is associated with larger armies and the creation of a larger pool of civilians with past military training. Recruiting via the market produces positive selection effects which decrease with the percentage of a demographic that a country seeks to recruit. Signing up for a professional army often indicates a predisposition for a military career; that predisposition likely helps one become a better soldier. If a country seeks to recruit all of its citizens of a certain age the method by which they are recruited (by conscripting them or by paying what it takes for them to enlist) does not produce any selection effect: in both cases all of that demographic is recruited. Because the efficiency advantage of a professional army over conscription decreases with the percent of the population recruited, conscription is more likely as the desired size of the military increases (Friedman, 1967, Lee and McKenzie, 1992, Ross, 1994, Warner and Asch, 1996).

In addition to increasing the size of the standing army, conscription also increases the number of civilians who have received military training in the past. This effect takes time. For example, let us assume that a country adopts conscription and requires conscripts to serve when they are in their late teens or early twenties. About fifteen to twenty years need to pass before that country has a pool of forty year olds with past military experience.

The demand for conscription is particularly strong when interstate conflict is likely, and when international security threats are likely to last into the long run and/or escalate into total war. That is the case for the following reasons. First, the likelihood of victory increases, *ceteris paribus*, with the size of one's military forces. Consequently, countries in an environment where interstate war is likely tend to adopt conscription because it increases the size of the standing army.

Second, increasing the percentage of the population that received military training in the past allows for rapid preparation for a total war. A total war is a conflict in which much of the population and production is mobilized according to the demands of the war. When a country with peacetime conscription seeks to rapidly increase the size of its active forces most of its new soldiers have received training in the past and consequently need less training in the present. By contrast, the new soldiers in a country with a professional army need more training before they are ready for combat. Conscription is well suited for meeting strategic, persistent threats because increasing the percent of the population with past military training takes time.

The threat of interstate war and invasion varies across countries. One of its important determinants is a country's geographic location. Some locations render a state both less vulnerable to an invasion and less capable of invading other states. Island nations are a notable example. The link between the stopping power of water and the international security policies of great powers has prominently been made by John Mearsheimer (2001). Eliot Cohen (1984) claims that the length of borders with hostile neighbors should predict conscription well. In this paper I test an argument of this type across a large number of cases.

An island nation is a country with no land borders with another country. Invading an island nation usually requires crossing a relatively large body of water. Invading

across water is difficult. First, it often requires launching an amphibious assault against entrenched forces. Second, the invading army needs to transport troops, equipment, and supplies across water. This is usually a demanding logistical task. The problem of invading across water renders island nations both relatively safe and relatively poorly positioned to attack others (Mearsheimer, 2001). The lack of both threat and opportunity reduces their demand for a large army, and hence for conscription. By contrast, countries with continental locations and numerous land borders are both, *ceteris paribus*, at a higher risk of being invaded and better positioned to invade others.

What happens when we challenge or relax the assumptions on which the argument linking conscription with interstate war and the number of borders is based? One notable way to do so is to argue that interstate war is not a key concern of policy makers. The other two critiques concede that international security is important, but they either question the importance of the stopping power of water, or they stress alternatives to self-help in the security realm.

One way to question the importance of interstate war is to argue that it occurs rarely and that the likelihood of its occurrence is declining. In the 1990s there were six interstate wars. This is a small number compared to the contemporary number of civil wars (Gleditch, 2004). However, even though interstate wars are rare, they are still a powerful concern for policy makers. This is the case for the following reasons. First, the relevance of an outcome is an increasing function of both the likelihood of its occurrence and of the magnitude of its effects, positive or negative. Even if the likelihood of interstate war is low, the possibility is taken seriously because the “payoff” tends to be very high. The two world wars and the associated developments are among the most destructive events in modern history. Second, the likelihood of interstate war could be higher than the current trends indicate. The record of the predictions of the end of interstate war is poor; such predictions were made before both World War I and World War II.

Another challenge to the primacy of interstate war is the claim that conscription is used for domestic purposes, instead of (or as well as) to meet international threats. Democracies generally have smaller armies than dictatorships (Mulligan, 2004). An explanation for this pattern is that democracies, unlike some dictatorships, do not use

their armies for internal repression. If an army engages in both repression and external defense, it needs more personnel, *ceteris paribus*, than an army which only engages in external defense. Dictatorships have an additional source of demand for large armies and conscription. I find some empirical support for this view.

The claim that large bodies of water deter invasion has been challenged on the empirics by Barry Posen (2002). Posen (2002) cites the case of Japan's conquests during World War II and the fact that Britain built an empire in the 19<sup>th</sup> century. While these are notable counter-examples for the stopping power of water argument, they do not undermine the argument for the following reasons. First, World War II is an exceptional period in the history of Japan, which is overall largely consistent with the stopping power of water argument. Japan tended to be isolationist prior to the Meiji period. The American occupation is the only successful one in recorded Japanese history, and the only notable attempted one since the aborted Mongol invasion in 1281 (Encyclopædia Britannica Online). Another notable island nation, Britain, has not been conquered since 1066 (<http://www.historyplace.com/worldhistory/topten/index.html>). An examination of overall Japanese or British history is highly likely to confirm the claim that invasions across water are difficult.

Second, the fact that Japan both conquered other countries and was conquered itself during WWII does not disprove a probabilistic argument. If invasions across water do happen, they can still be systematically less likely than invasions across a land border. A probabilistic claim, unlike a claim about necessary or sufficient causes, cannot be disproved by a small number of contradictory cases. This renders a test across many cases important. I provide such testing in this paper.

The stopping power of water argument, while systematically important, most likely does not exhaust even the geographic determinants of the international threat environment. This calls for further specification of the relationship between the threat environment and conscription in future research.

Finally, there are alternatives to self help in the international realm. A notable alternative strategy is to rely on international alliances. Great powers might be more likely to have conscription because they, unlike weaker countries, tend to provide for their own security. Population is one of the main foundations of great power status

(Mearsheimer, 2001). The alternative of relying on alliances may be particularly appealing to small countries. Small countries may lack conscription because great powers provide security for them, or because they would lack the ability to resist their rivals militarily even if they did adopt conscription (Cohen, 1985).

### **III. Institutional Constraints and the Logic of the Decision to Enlist**

In deciding whether to impose conscription, policy makers face important domestic political and economic institutional constraints. Those constraints determine whether a state can more effectively generate coercive or material inducements for military service. Coercion and material inducements are, in the Olsonian (1971) terminology of collective action analysis, selective incentives. I argue that the decision dynamics that affect the provision of selective incentives are a key determinant of military recruitment policy choices. This implies that the potential recruits are rational self-interested actors. A set of prominent alternative arguments in the literature (Posen, 1993, Levi, 1997, Cohen, 1985) posits that the potential recruits are primarily or to an important degree driven by moral, emotional, and/or ideological factors. My argument in this section consists of two steps. The first step provides the logic for why selective incentives matter more than the alternative motivations. The second step specifies the factors that determine which type of selective incentives a state is likely to rely on.

The following equation presents the determinants of the decision to enlist stressed by my argument and by the alternative arguments.

$$U_e = d + SI - r + \Delta w * U_w$$

$U_e$  refers to the utility a person receives from enlisting. It is a function of the following variables.

$d$  refers to the value a person places on enlisting as fulfillment of one's duty. It is a measure of the satisfaction he feels when he is doing what he believes is right. The principal sources of this sense of duty stressed by the literature are nationalism and commitment to democracy. Bellow I describe my critique of these arguments.

$SI$  refers to the selective incentives which affect enlistment, and  $r$  refers to the risks associated with military service. I describe both in more detail bellow.

$\Delta w$  refers to the change in the likelihood of winning the war by the military that the recruit is considering joining should he decide to enlist.  $\Delta w$  is a function of the number of soldiers in that military and in the hostile forces.

$U_w$  refers to the utility the potential soldier receives from the military winning the war. It is positive if he wishes that the military would win, negative if he hopes it will lose, and zero if he does not care about the outcome of the war.

A person will not necessarily enlist when  $U_e$  is larger than zero. They will enlist when the utility received from enlisting is higher than the utility received from the best alternative course of action. The value of the best alternative course of action is the opportunity cost of enlisting.

The alternative arguments posit that variation in  $d$  and  $U_w$  rather than in  $SI$  is of primary importance. The logic behind my claim that selective incentives are of primary importance is the following.

The analysis of what motivates people to enlist should begin with identifying national defense as the primary good that the military seeks to provide. Defense approximates a public good. A public good is both joint (can be consumed by many people at the same time) and non-excludable (consumption cannot be made conditional on payment). The inhabitants of a country are all better off at the same time if the military is defending its borders; hence the “consumption” of defense is joint. Meanwhile, the military cannot choose to defend only those citizens who paid taxes into its budget; hence the “consumption” of defense is non-excludable.

The idea that collective action in pursuit of a public good is problematic is associated with the work of Mancur Olson (1971). Olson (1971) argues that in the pursuit of a public good there is a powerful incentive to free ride: one is better off if someone else works to provide it. Moreover, as the number of people whose work is needed to provide the public good increases the relevance of each individual contributor decreases. Eventually it becomes vanishingly small. When the decision whether or not to contribute has little effect on whether the good is provided, then whether that good as perceived as beneficial or harmful becomes irrelevant. Instead, selective incentives alone drive

participation in collective action. They can be positive (rewards conditional on participation) or negative (penalties against non-participation).

However, the claim that selective incentives are the only relevant determinant of collective action decisions is an overstatement. The importance of the characteristics of the collective good itself is underestimated by Olson (1971) because of his assumption that actors do not consider the likely actions of others in making their decisions (Medina, 2005). Olson's (1971) approach is appropriate in the games where the players have a dominant strategy that leaves them better off no matter what the other player does. Two player prisoner's dilemma is such a game. However, as Thomas Schelling (1978) points out, in a multi player prisoner's dilemma this is not necessarily the case. Schelling (1978) analyzes a multi player prisoner's dilemma where all the players value the public good equally as well as prefer free riding to working to provide the good. He further introduces the concept of the  $k$  group.  $k$  is the minimum number of players whose cooperation is necessary for the public good to be provided; they are better off if they all choose to cooperate. Given this set up, cooperation is possible if its costs do not outweigh the extent to which the players value the public good, and if the players believe that a sufficient number of others will cooperate as well. This implies that the way in which the players perceive the public good itself is not irrelevant; under certain conditions they are more likely to contribute if they do value it.

Given the importance of selective incentives, how do states decide whether to provide them in the form of coercion or of material inducements? The following institutional constraints shape that choice.

#### **a.) Labor Market Regulation**

The variation in labor market flexibility is a systematic determinant of the effectiveness of coercion relative to market mechanisms as selective incentives. Coercion is effective given any labor market structure. The effectiveness of pecuniary incentives to enlist is lower the higher is the degree to which the labor market is regulated.

Labor market regulations are restrictions on firing and part time employment, and requirements placed on firms to provide benefits to their workers (Botero et al., 2003). Regulated labor markets provide high levels of job security for the employed, at the cost of fewer job opportunities for the unemployed and for those who seek to switch careers.

When a country with a highly regulated labor market attempts to use market incentives to increase the size of its military it faces the problem that its workers are reluctant to give up their secure jobs. The workers are also concerned about their prospects for finding a new job once they leave the military and return to the job market. Consequently, regulated labor markets are better positioned to coexist with a system of conscription, with military service regularized and integrated with the labor markets.

The most notable work linking conscription with a general propensity to regulate is Mulligan and Shleifer (2005). They argue that countries with a common law legal tradition have less conscription, as well as other kinds of regulation, than countries with other (e.g., French) legal traditions. The latter tend to have a large bureaucratic apparatus already in place which reduces the fixed costs of conscription. Mulligan and Shleifer (2005) further argue that having a large population also reduces the fixed cost of conscription and leads to more conscription.

A problem for the Mulligan-Shleifer (2005) argument is that a direct link between common law and conscription appears to be lacking. The legal system and the decisions made by the judiciary do not affect conscription directly, but through their effect on the size of the bureaucracy. However, the authors do not test for this additional step, which leaves room for alternative interpretations of the link between common law and conscription. The argument in this paper provides such an alternative. It is demonstrated elsewhere that common law leads to less labor market regulation (Botero et al, 2003). As I argue above, it is labor market regulation that directly affects conscription.

I also argue that the claim that fixed costs are the mechanism through which population size affects conscription is questionable. Population size is a proxy for a large country with many borders and opportunities for interstate war, as well as with the ability to provide for its own security. I argue and show empirically that it is primarily the borders effect that matters.

While coercion is roughly equally effective across different labor market regulation levels, it is not equally effective across different regime types. I address this issue in the following section.

### **b.) Regime Type**

Dictatorship leads to more conscription for two reasons. First, as I argued above, dictatorships have a higher demand for soldiers because some use them for internal repression. The other important reason is that potential conscripts are better positioned to resist military service requirements under democracy. In other words, dictatorships are more effective than democracies in using coercion as a selective incentive. As a consequence, when both a democracy and a dictatorship want an army of a certain (identical) size, the dictatorship is more likely to use conscription to raise that army. I also specify three additional hypotheses which qualify and extend these claims.

The length of required military service under democracy is partly the result of a bargain between the *k* group and the state. Because defense is a public good, the other citizens of the country value the benefits produced by the *k* group as much as the members of the *k* group value those benefits. However, most of the cost of military service accrues to the members of the *k* group. They consequently care more than the other citizens about those costs. *k* group members may be willing to accept conscription up to a certain threshold of service demanded. After that point they will oppose and seek to avoid the service requirement.

*k* group members can use voice or exit to undermine conscription (Hirschman, 1970). Voice refers to political mechanisms, such as demonstrating against the draft or voting for a political party that opposes it. The opposition to the Vietnam War in the United States is a notable example of this mechanism at work. College students, who were directly affected by the draft, were one of the principal groups involved in the protests (Cohen, 1985).

Exit refers to temporary or permanent emigration in order to avoid the draft. An example of this mechanism at work is Serbia in the early 1990s. By 1992, 200,000 people, including many university graduates, emigrated from Serbia. For many an important motivation behind this decision was the desire to avoid compulsory military service and involvement in the Yugoslav wars of the early 1990s (Mann, 2005).

Although Slobodan Milosevic's regime in Serbia was not fully able to do so, dictatorships are generally better positioned to curb both voice and exit than democracies. Banning political parties, restricting the right to vote and the right of assembly are

inherently undemocratic practices. Moreover, authoritarian institutions such as the secret police facilitate such repression. Meanwhile, emigration restrictions are generally rare, but when they do occur they are usually imposed by dictatorships (Rogowski, 2005). Across communist states (an authoritarian subtype) in Europe, emigration restrictions were the rule rather than the exception (Dowty, 1987). Because dictatorships are better positioned to repress opponents of conscription, there is more conscription in dictatorships than in democracies.

The explanatory power of this argument can be improved by relaxing the assumption that all dictatorships are the same. First, we can distinguish between dictatorships by the strength of their repressive apparatus. The highly repressive or totalitarian dictatorships have a secret police and/or party-run paramilitaries at their disposal. The weaker dictatorships lack this capacity to repress. The availability of mechanisms of repression is particularly relevant to the politics of conscription because the potential targets of repression are conscripts who have access to weapons. Mixed regimes and weak dictatorships may lack the capacity to repress soldiers. This would result in an effect of regime type on conscription that is not fully linear, with most of the dictatorship effect generated by purely authoritarian states.

A different distinction can be made between dictatorships that are rich rentier states and those that are not. A rich rentier state does not primarily rely on taxing its citizens for its revenues. Rather, natural resource exports generate a significant part of the revenues. The most notable rentier states in the modern world are rich oil-exporting countries. They are characterized by an authoritarian bargain: the elite remains in power in exchange for sharing some of the oil income with the citizens (Crystal, 1990, Gause, 1994). In addition to not having to rely on revenues from taxing their citizens, rentier states can afford to ask for less military service from them. Instead, the state can build an army which is capital intensive or it can pay foreigners to enlist. The countries of the Gulf Cooperation Council (GCC), Bahrain, Qatar, Oman, Saudi Arabia, Kuwait, and the United Arab Emirates are good examples of this mechanism at work. All six countries import advanced weapons and most if not all have substantial contingents of non-citizens in their armies. Only one, Kuwait, has conscription (War Resisters' International, 1998).

The third distinction is between communist and non-communist dictatorships. One important difference between them is that communist countries had command rather than market economies, while many non-communist dictatorships have market economies. We can think of communist countries as by definition being both dictatorships and having particularly heavily regulated labor markets. Therefore, two important causes of conscription were both present there. In addition, communist countries were in practice particularly likely to restrict emigration (Dowty, 1987). Because several determinants of conscription all systematically occurred in communist countries, those countries were particularly likely to demand extensive military service.

### **c.) Alternative Arguments - Ideology**

There are two principal critiques of the claim that enlistment decisions are driven primarily by selective incentives. The first is the claim that enlistment is, at least to an important degree, a moral or an emotional decision. This claim is prominent in the work of Levi (1997) and Posen (1993). The second critique is that enlistment is driven by the individual's desire to help their country win wars. This mechanism is present in Posen (1993).

When stressing the importance of duty, it seems natural to argue that people may believe that they have a duty to defend the country to which they have a nationalist or a pro-democratic attachment. In other words, there is a duty to enlist. This argument predicts that loyalty leads to less conscription. Loyalty is an alternative to selective incentives in motivating behavior, and it reduces the need for conscription. Loyalty leads to armies which are neither conscript nor professional but voluntary.

The argument stressing commitment to war aims also predicts that loyalty leads to less conscription if potential soldiers act emotionally rather than strategically. For a strategic actor the collective action problem and the very limited effect of his enlistment on the likely outcome of a war present formidable obstacles to enlisting as means of affecting the outcome of a war. However, one may assume that potential recruits do not perform such an analysis and are instead directly driven by their preferred outcome of the war. In that case, commitment to war aims is an inducement to enlist, which again reduces the need for a draft.

However, arguments that stress ideological commitment generally associate it with more rather than less conscription. For example, claims that a sense of duty is the key variable generally do not conceptualize a duty to enlist. The predictions that follow from such arguments would be highly likely to fail to explain manpower policy patterns we observe in practice. For example, the advent of nationalism has not led to the demise of conscription. More than half of the countries in the world use conscription, which indicates that they find coercion necessary. In countries that do not have conscription, the military usually offers various material inducements to enlist. Finally, instances of mass volunteering such as those in Europe at the beginning of World War I or in the U.S. at the beginning of the Civil War are short lived in nature. The pattern is that even in those cases conscription (or the provision of other incentives to enlist) is imposed as it becomes clear that the fighting will not be brief, immediately triumphant, and devoid of casualties.

The claim that theorists who stress ideological factors tend to make instead is that there is a duty to comply with conscription. In other words, the duty payoff is conditional on conscription already being in place. I argue that there are three major problems with this approach. First, this argument is at least partly contradictory. If the potential recruits are primarily driven by their sense of duty, than why is conscription necessary in the first place? Meanwhile, the main difficulty for the logic of the commitment to war aims argument is the collective action problem. Second, the literature does not adequately explain how the sense of duty to serve is generated. Third, the argument does not fit the evidence. I show empirically that there is no strong causal relationship, positive or negative, between conscription and the indicators of ideological commitment.

In the rest of this section I will describe arguments that stress ideological commitment in more detail.

### **i.) Nationalism**

Barry Posen (1993) claims that nationalism is a necessary prerequisite for raising and maintaining large armies. According to Posen, nationalism generates a spirit of self-sacrifice for national ends, as well as a commitment on behalf of the population to their country's goals. This commitment and spirit of self-sacrifice render people more willing to become soldiers and more likely to fight with élan and not desert. Posen (1993) argues that nationalism is generated by the state via indoctrination in schools, through the media,

and during military service itself. Over time, states either succeed in promoting nationalism and establish large armies, or perish.

The first problem with Posen's argument is that he does not address the tension created by positing that soldiers are driven by self-sacrifice and identification with their country's war aims and the fact that the mass armies he describes (19<sup>th</sup> century French and Prussian) were raised by conscription. Why is coercion necessary given such a nature of the recruits?

The second problem is that Posen (1993) does not clearly specify the causal mechanism linking nationalism and enlistment. Do the nationalist recruits strategically view enlistment as means towards their end of winning wars, or do they enlist without calculation because service is a matter of duty?

The third problem is that both those mechanisms have flawed logics. The account of how the sense of duty is generated is problematic, both in Posen and in the related elite-led ethnic conflict arguments in general. The problems are the following. First, the strongly stated versions think of government officials as shrewd manipulators while that the population can be duped is taken as unproblematic. The actors are not treated consistently: some act strategically, others do not (Boix, forthcoming, Mann, 2005). In practice, the population will not necessarily accept a claim that is propagated by the schools and the media. Posen (1993) describes the efforts of the Prussian state, which were prioritized over nationalist indoctrination, to persuade their workers that loyalty to the Monarchy, rather than to social democracy, is in their interest. Those efforts were largely unsuccessful.

One response to this problem is to posit that the effect of indoctrination is not to create a sense of duty but to create awareness of the pre-existing interests that those who live in the same country share. By contrast, Prussian workers could not be persuaded that having political power and receiving transfers from the rich was not in their interest. However, this answer points to a different, instrumental view of nationalism (which I address below). Furthermore, it is puzzling that it is necessary that people be continuously reminded, starting at an early age, of what their pre-existing interests are.

Another response is to posit that the population will accept the creation of a duty payoff only when doing so facilitates the attainment of their other goals. Adding a duty

payoff to enlistment is than an internal preference alteration solution to the collective action problem (Munger, forthcoming). The population is acting strategically when it chooses to internalize the duty payoff because they prefer the situation where everyone enlists to the one where no one does and the country is defenseless. The creation of the duty payoff takes them from the latter to the former.

The main problem with this argument is that there is a preference alteration solution to any problem. The unpleasantness of any situation can be removed by persuading those in it that their situation is actually enjoyable and/or appropriate. Claiming that such alterations of preferences are an effective strategy leads one to over predict happiness and harmony.

Because of the problems with this approach, we should expect its effectiveness, the size of the duty payoff, to be limited. Finally, even if its effectiveness is not limited, it is not clear why the strongly stated versions of the moral nationalism argument, that duty trumps other concerns, would be true.

Meanwhile, the instrumental nationalism claim is that nationalism is the recognition of shared interests by people who live in the same country or geographic area. The military seeks to forward those interests. Hence, citizens tend to be better off when their country's military wins wars. This form of nationalism is instrumental because nationalism or serving one's country is not a goal in and of itself, but a means of advancing other interests.

The main difficulty for instrumental nationalism is the collective action problem, which is particularly acute in the raising of large armies. A pure instrumental nationalist's payoff from enlisting equals the product of how much he values victory with the likelihood that his decision to enlist will decide the war. Because the latter is very small, the former is sharply reduced in importance. Consequently, barring selective incentives, each individual is better off if his fellow citizens and not he fight for the collective good.

However, commitment to the goals of the war may increase support for the mechanisms that require one to serve while requiring others to serve as well. Conscription is a notable such mechanism. A person may support conscription laws if they believe that their passage will lead to the formation of the  $k$  group. The decision on whether or not to support conscription is also a function of the extent of the services

demanded (measured primarily in time and risk) and of whether or not one is assigned the role of a k group member by the conscription legislation. This view allows for a positive relationship between conscription and nationalism (but not for a strong link between nationalism and an individual's decision to enlist).

There are three main limitations of the link between nationalism and the support for conscription. First, the support for a mechanism to ensure the provision of defense may be universal up to a point. Support for conscription could then follow directly from increases in military threats. It is likely that the people who lived before the age of nationalism also had a strong preference against suffering invasions by foreign armies. Second, commitment to national goals leads to support for conscription by k groups members only as long as the costs of service do not outweigh the value placed on national goals. Third, governments, and especially authoritarian governments, may be able to impose conscription without having broad popular support.

#### **ii.) Commitment to Democracy and Egalitarianism**

There are three prominent arguments in the literature that posit that democracy leads to conscription. The logic of the first one is analogous to the logic of moral nationalism: it is moral to comply with the policies, including conscription, which are arrived at democratically. There is no moral duty to comply with policies of dictatorships. The second argument links democracy with egalitarian values, and egalitarian values with conscription. The third argument is that conscription causes democratization. Let us examine each of these claims in detail.

The concept of contingent consent is central to Margaret Levi's (1997) argument. The degree of citizens' consent to a policy increases with an increase in the extent to which the decision to adopt that policy was arrived democratically. Consent is also contingent on whether the other members of the polity are complying with the policy. Levi (1997) further argues that a policy is more likely to be adopted and to persist if the citizens consent to it. She applies this logic to conscription by arguing that the more democratic is the process whereby conscription is adopted, the more likely is it that the citizens will comply with conscription.

The first problem for this logic, as it is for the parallel logic of moral nationalism, is why conscription is necessary at all. If the citizens are primarily or to an important

degree driven by a moral commitment to democracy, this should lead them to volunteer, reducing the need for conscription. The other contingent consent logic is that one's likelihood of supporting (or not evading conscription) is a function of the percentage of the others who are already serving. This claim is also problematic. It proposes a tipping model that should lead to the prediction of two equilibria: one where everyone serves and another when no one does (barring external inducements). The implied claim that the situation where everyone serves and does not want to leave the military is an equilibrium seems a priori implausible. The tipping model logic appears to fit revolutions, where it is crucial to end up in the winning camp, better than the decision to enlist.

Another flaw of the argument is the lack of clarity on what should happen to conscription under dictatorship. Levi (1997) argues that loyalty to the regime type helps conscription under democracy, but not under dictatorship. If one is to argue that consent generally powerfully shapes policy choices, then the claim that dictatorships are less likely to have conscription follows.

A weaker version of the argument could concede that consent matters less under dictatorship than under democracy. The theory would then predict that there is more conscription under pure democracy than under partial democracy, while conceding its inability to explain what happens to conscription under dictatorship. In the empirical section of the paper I show that neither the weaker prediction nor the stronger predication are consistent with the evidence.

The second prominent argument linking democracy and conscription stresses the egalitarian nature of conscription. Conscription laws usually require that men from different social backgrounds serve together. By contrast, one complaint against a professional army is that the relatively poor are overrepresented because of their greater need for the material inducements offered by the military. That the rich can avoid military service is considered inconsistent with democratic ideals (Cohen, 1985).

In the arguments which stress egalitarianism agency is often unclear. For example, the claim may be that the poor prefer conscription to a professional army because they want the rich to serve alongside them. If that is the case, the mechanism whereby egalitarianism motivates democracies to adopt conscription could be through the electoral choices of the poor which are based on this preference. However, when a

professional army is replaced with conscription the poor lose the material inducements for military service that were previously available. That they would accept this loss in order to have the rich serve alongside them is not a priori clear.

The third claim is that conscription leads to democracy. A large, conscript army necessitates the arming of the masses. Once the masses are armed, they no longer accept minority, authoritarian rule, and demand political rights and democracy. Because they are now armed and battle-tested, they are likely to get their way (Dolmas, 2004).

The main empirical critique of this argument points out that totalitarian states, such as Joseph Stalin's USSR, adopted conscription without democratizing (Cohen, 1985). That example illustrates that, as I discuss above, some authoritarian states have a repressive apparatus independent of the army. The argument about the difficulty of repressing armed groups is probably better suited to explain the relative lack of conscription in mixed or weak authoritarian regimes.

#### **IV. Testing**

I analyze both modern (1990-2000) and historical (1850-2000) data. The advantage of the smaller, modern dataset is that this period is well covered by indicators for all the relevant independent variables. The advantage of the larger, historical dataset is that it includes most of the history of conscription. Examining this data allows us to answer the question of whether many of the findings based on 1990s data generalize across time. Furthermore, the larger number of observations facilitates analysis of panel data: the testing across time as well as across countries.

What does data reveal about the determinants of conscription? I begin to answer that question by describing the indicators and the variables that I use.

##### **i.) Indicators and Variables**

I use two measures of conscription. The first is a dummy variable for whether or not there is conscription in place. The second is the length in months of required military service. Previous research has tended to solely use the dummy variable, but the required length of conscription contains more information. For example, requiring longer service places a larger burden on the population. Political conflicts occur over the length of service as well as over the decision of whether or not to have conscription (e.g., see Kovacs, 1946, on France).

Measuring the length of conscription can be problematic in those instances when service length varies based on the branch of the military in which the conscript is to serve. For example, required service length in the army and the navy may differ. I adopted the following decision rule to deal with this problem. When the length of service is not uniform, I use the requirement for the army. If there are different lengths of service for different types of units within the army (e.g., infantry or the engineers), I use the service term for the infantry. This rule is preferable to its alternatives because the bulk of military personnel usually serve in the army, and the bulk of army personnel usually serve in the infantry. The alternative of averaging the lengths of service across the different branches is less appropriate. For example, if only a small fraction of the military personnel serves in the air force, giving the same weight to their term of service as to the term of service in the army misrepresents the burden that conscription places on the average conscript. However, the relevant results described in this paper hold up when an indicator based on such a procedure is used.

The main sources of the conscription length and dummy indicators are Mulligan's and Shleifer's (2005) data, as well as Seung-Whan Choi's and Patrick James' (2003) data. In covering the post-WWII period, I supplemented these datasets with data from John Keegan et al (1979), the CIA World Factbook, and the Library of Congress Country Reports. The historical data comes from historical editions of encyclopedias (e.g., *Appletons' Annual Cyclopædia*) and historical cross-national military overviews (e.g., Gooch, 1980), as well as from scholarly papers on particular countries.

The measure of the geographically determined threat environment is the number of a country's land borders. The sources for the indicator are Correlates of War data (COW, <http://www.correlatesofwar.org>) and the CIA World Factbook. COW data records borders between sovereign countries. This is appropriate when the focus of the research is on explaining war between sovereign states. However, it leads to problems when examining changes over time in the overall threat environment. For example, COW codes the United States as only having one border (with Mexico) until 1920 when Canada appears in the dataset as a sovereign state. Leaving aside the issue of choosing the appropriate date for marking Canada's sovereignty, for the purposes of this paper it would have been preferable to also code, for example, borders with empires such as the

British Empire. Issues of this kind can render testing for the consequences of changes across time in the number of a country's land borders (e.g., in specifications with fixed effects) highly problematic. However, the average number of borders over a long period of time is an appropriate measure of the country's geographic location and threat environment.

The indicator of labor market regulation is from Juan Botero et al. (2003). Their employment laws indicator measures the extent of legal protections against dismissal, and the extent to which part time employment and working conditions are regulated. In part because this indicator is only available for a limited number of countries, I also use a dummy indicator for whether a country has a common law system. As Botero et al. (2003) show, common law is an important determinant of labor market deregulation, and hence a proxy for labor market deregulation. Unfortunately to the best of my knowledge neither the common law nor the labor market regulation indicators are available for the pre-WWII period.

I use several indicators of regime type. The first is a dummy variable coded by Jose Antonio Cheibub and Jennifer Gandhi (2004). For each year, they classify each sovereign country as a dictatorship or a democracy. A country is a democracy if its chief executive and its legislature are elected, there is more than one party, and alternation between parties in power occurs (Przeworski, 2000).

An indicator that treats regime type as a dummy variable is not optimal for examining causal effects of mixed regime types. I consequently also use Freedom House's political rights indicator, which classifies regimes as free, partly free, or unfree. The indicator measures the extent to which voters can choose freely among different candidates for office. Freedom House also estimates the extent to which elected office holders, rather than for example the military or the king, have the authority to make policy choices.

The final regime type indicator is the polity score. Polity data covers the 19<sup>th</sup> century as well the modern period (<http://www.cidcm.umd.edu/polity>), which allows for the testing of the historical relationship between conscription and regime type. The polity score measures the openness of political institutions (e.g., constraints on the executive, the availability of mechanisms through which citizens can express their policy

preferences). Like the Freedom House indicator, it also allows for mixed regime types as it is on a -10 to 10 scale. The polity score increases with the level of democracy, as opposed to Freedom House and Cheibub and Gandhi (2004) measures that increase with authoritarianism.

The rentier state indicator is whether or not a country is a member of the Gulf Cooperation Council (GCC). I plan to expand on this indicator in the future by including additional countries which should be considered rentier states. One possibility is to use a dummy indicator of whether a country is a member of OPEC. This variable is associated with less conscription, but the effect is smaller than the effect of the GCC dummy (those results are available upon request).

The dummy for whether a country used to be communist (I set aside the issue of which countries should still be considered communist in the 1990s) is based on data from Mulligan et al (2004). The following countries were communist during much or all of the 1970-90 period: Albania, Afghanistan, Angola, Bulgaria, Cambodia, China, Republic of Congo, Cuba, Czechoslovakia, East Germany, Ethiopia, Hungary, Laos, Mongolia, Mozambique, Nicaragua, North Korea, Poland, Romania, Somalia, USSR, Vietnam, Yemen PDR, and Yugoslavia. For use in the econometric analysis of 1990-2000 data, I extended the list to the countries that were formerly part of the USSR, Czechoslovakia, or Yugoslavia, and which became independent in the 1990s.

I do not yet test for effects of communism or the rentier state in the historical regressions. The available indicators either do not cover the pre-WWII period or are not available across time.

The indicators of nationalism and ethnic homogeneity (or a relative lack thereof) are ethnic diversity and self-expressed national pride. The ethnic diversity indicator is from Alberto Alesina et al. (2003). The claim that diversity undermines collective action is made by, among others, Alesina et al. (1999), and Easterly and Levine (1997). Ethnic minorities are also generally less nationalist than the dominant, often eponymous ethnic group. The literature offers two explanations for why that is the case. First, ethnic minorities often face discrimination at the hands of the dominant group, which leads to resentment. Second, minorities sometimes identify not with the state in which they live but with the state in which their co-ethnics are dominant (Smith and Jarkko, 2001). In

their examination of the responses to International Social Survey's Program's 1995 National Identity Study, Tom W. Smith and Lars Jarkko (2001) find that in 19 of 21 countries the members of the dominant ethnic group scored higher on self-reported national pride than the members of minority groups.

The source of the national pride indicator is the World Values Survey. The indicator is based on the answer to the question: "How proud are you to be [substitute nationality]?" The nationality in question is always that of the sovereign state in which the survey is held.

Historical measures of ethnic diversity and nationalism are lacking in the literature (Campos and Kuzeyev, 2007). Consequently, it is currently not possible to examine the historical relationship between nationalism, diversity, and conscription. The results obtained using modern data show that this relationship is weak. While it would be informative to test for this using historical data as well, the weak relationship revealed by the modern data makes the lack of a historical nationalism control less problematic.

The measures of economic development are the Gross Domestic Product per capita (GDP per capita) and urbanization. The urbanization indicator comes from COW data. I use it when examining historical data. Largely rural economies tend to be underdeveloped, making urbanization an appropriate proxy for development. A historical GDP per capita measure (from Maddison, 1995, via Boix, 2003) is also available. The correlation between urbanization and the GDP per capita is 0.61. Because the Maddison (1995) indicator has about four times fewer observations than urbanization, I use it as a secondary measure and in fewer specifications.

The a priori relationship between economic development and conscription is not clear. In a rich country, a professional army costs more because the army competes with a vibrant economy over personnel. However, the opportunity cost of removing people from the private sector by conscripting them is also higher in a developed country.

The indicator for civil wars is a dummy for whether a civil war occurred. In the historical regressions, it takes the value of one in the years in which a civil war was ongoing and in the nine years following its end. In the modern regressions, it takes a value of one if a civil war occurred between 1990 and 2000, and zero otherwise. The sources are Kristian Gleditsch (2004) and Boix (2003). The a priori relationship between

civil war and conscription is not clear. On one hand, civil war may cause more conscription as it increases the government's need for troops. On the other hand, it may disrupt the capacity of the state to carry out conscription. Controlling for civil war is important in order to address the possibility that the supposed effects of other variables on conscription are actually due to civil war.

The indicator for interstate war is from Gleditsch (2004) and COW data. I do not include it in the modern regressions because of the small number of interstate wars in the 1990s. Including it does not alter the key results. In the historical regressions I include it using the same format as that of the civil war indicator.

In some specifications I control for the relative size of the military. Holding the size of the military constant can help us answer the following question: given that country A and country B both seek a large military (or both seek a small military), what determines whether they will extensively use conscription rather than hire additional professional soldiers? This question matters, for example, when examining the relationship between dictatorship and conscription. Dictatorships may use conscription more because they demand a larger military, because they are more likely than democracies to use conscription at any size of the military demanded, or both. We can seek answers to such questions by comparing the specifications of the model that include this control with the specifications of the model that exclude it.

Alternatively, we can think of conscription and long terms of service as being roughly synonymous with (or closely related to) large militaries. In that case, specifications that include the size of the military control as an independent variable are not appropriate. I report results obtained when the size of the military indicator is included as well as the results obtained when it is excluded.

The first indicator of the size of the military is total military personnel divided by the total male workforce. Using data on male workers only is appropriate because most militaries consist predominantly of men. Using the alternative forms of this indicator (e.g., personnel/total workforce or personnel/population) produces a slightly weaker empirical fit with conscription. The indicator is based on Mulligan's and Shleifer's (2005) data on military personnel, and on World Bank data on the workforce. When analyzing historical data, I use the slightly less precise military personnel's share of the

total population indicator. The source is the COW data. Historical data on the workforce and its breakdown by gender is to the best of my knowledge not available.

## ii. Correlations: Modern Data

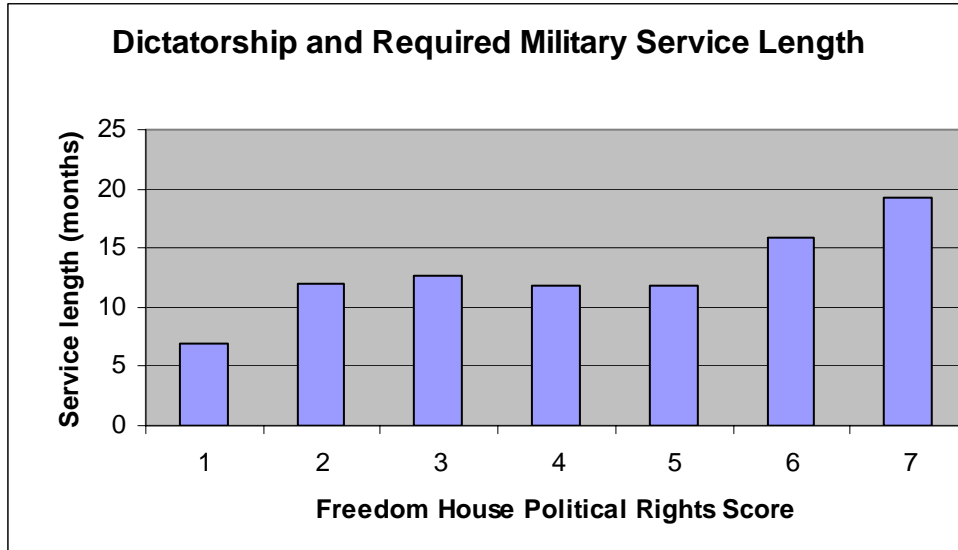
The following section complements regression analysis in two ways. First, it allows for a preliminary examination of the relationship between communism and conscription. Second, I show the correlation between conscription and two of its determinants which can be divided into relatively natural sub-categories. Those determinants are the number of land borders and dictatorship as measured by Freedom House on a 1 to 7 scale.

The first graph illustrates that communist countries on average required much longer military service than the other countries.



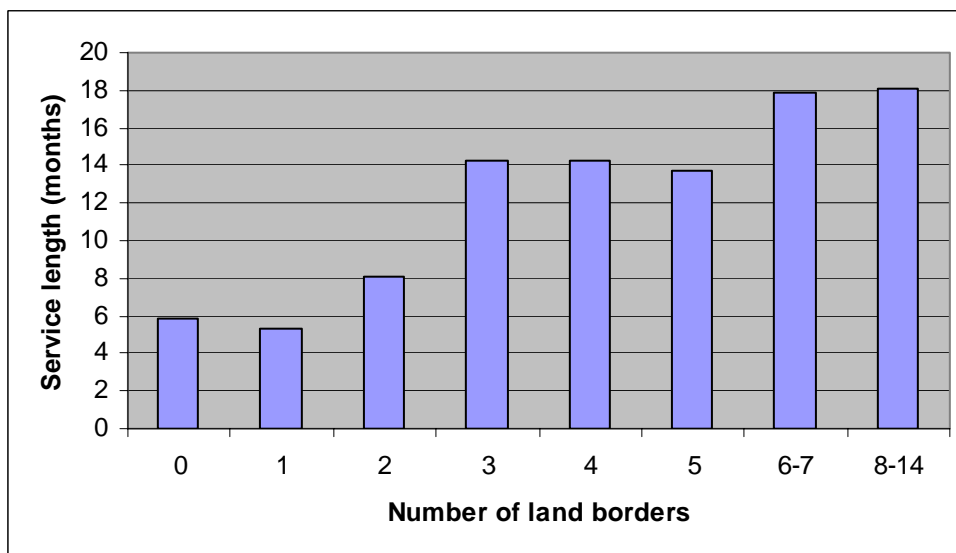
The required service was usually 2.5 to 3 times longer in communist than in non-communist countries. The effect is very large and consistent with the predictions of the theory posited in this paper. Further testing is necessary to determine whether this relationship is causal or spurious.

The following graph shows the average levels of required military service for each of the seven categories of Freedom House's political rights indicator between 1990 and 2000.



Required military service generally increases with an increase in authoritarianism. However, this effect is at its strongest when moving from the most democratic regimes (category 1) to more mixed regimes (category 2 and higher). The other notable increases are from category 5 to category 6 and from category 6 to category 7. This pattern indicates that most of the dictatorship effect is due to transitions from purest democracies to more mixed systems, and from mixed systems to the purest authoritarian states.

The final graph shows the relationship between the number of a country's land borders and the length of required military service. Data is for the 1990-2000 period.



The length of required service generally increases with an increase in the number of land borders. It is not a priori clear why some increases in the number of land borders (e.g., going from 2 to 3) matter more than others.

In the next section, I check for the robustness of these and other empirical patterns by using regression analysis.

### iii. Regression Results: Modern Data

The following table shows the determinants of conscription in the 1990s. The results are as follows:

The Determinants of Conscription, 1990-2000								
	Logit; DV: Conscription Dummy				OLS; DV: Service Length (months)			
	1	2	3	4	5	6	7	8
Dictatorship (Cheibub)	1.47* (1.88)	0.82 (0.92)	3.348*** (2.99)	3.954** (2.42)	4.794** (2.03)	4.3* (1.75)	8.675*** (3.15)	8.248** (2.03)
Borders	0.511*** (3.34)	0.508*** (3.56)	0.752*** (3.6)	1.362** (2.18)	0.815** (2)	0.883** (2.18)	0.738* (1.89)	0.684 (1.44)
Common Law	-2.934*** (4.08)	-3.545*** (4.29)			-7.327*** (3.13)	-6.319*** (2.74)		
Labor Mkt. Reg.			3.293** (2.19)	4.815*** (2.61)			5.334*** (3.37)	4.534* (1.96)
Population (log)	0.092 (0.43)	0.245 (1.14)	-0.594 (1.27)	-1.7*** (2.76)	0.609 (0.91)	0.459 (0.7)	0.186 (0.23)	-0.493 (0.53)
GDP per capita (\$1,000)	0.016 (0.46)	-0.009 (0.31)	0.111 (1.56)		-0.099 (1.21)	-0.177*** (2.66)	-0.076 (0.85)	-0.03 (0.17)
Ethnic Diversity	-0.623 (0.55)	0.881 (0.65)	-3.31 (1.61)		-2.792 (0.8)	0.995 (0.29)	-3.954 (0.97)	
Patriotism				-6.19 (1.09)				-2.14 (0.26)
Civil War Dummy	-0.747 (1.09)	-1.468* (1.71)	0.944 (0.77)		-2.775 (1.21)	-4.876** (2.13)	-4.653* (1.96)	-4.199 (1.36)
GCC Dummy	-2.947** (2)	-4.999** (2.12)			-4.792 (1)	-10.942** (2.01)		
Communist Past	-0.132 (0.18)	-1.304 (1.33)	0.862 (0.62)		1.764 (0.76)	-1.481 (0.54)	-0.319 (0.13)	1.327 (0.32)
Soldiers/male workers (log)		1.799*** (4.49)				4.343*** (3.98)	4.029*** (2.63)	
n	128	119	82	62	127	118	79	62
pseudo r sq./r sq.	0.43	0.56	0.56	0.71	0.283	0.3981	0.4853	0.3083

Coefficients with t and z statistics in parenthesis.

\*\*\* - significant at 99%; \*\* - significant at 95%; \* - significant at 90%

An increase in the number of bordering countries is associated with more conscription. The effect is usually statistically significant and its direction and size are consistent across the different specifications. An additional land border adds close to another month of required service. It is notable that this effect holds when controlling for

the size of the population, and that it is much stronger than the population size effect. This is consistent with the claim that the relationship between geographic location and conscription is causal rather than a spurious one due to great power status. Interestingly, while the effect of borders matters across all specifications, it affects the decision of whether or not to adopt conscription (the dummy DV, specifications 1-4) more robustly than the decision on its length (the length DV, specifications 5-8).

Dictatorship is also associated with more conscription. This is consistent with the theory advocated in this paper and inconsistent with the claim that loyalty to democracy leads to more conscription. The effect on conscription of going from a pure democracy to a pure dictatorship varies from about an additional four months of military service to an additional eight months. The effect passes the statistical significance threshold in all but one specification. The dictatorship effect on the length of conscription is more robust than the dictatorship effect on the decision whether or not to adopt it.

The dictatorship coefficient tends to be lower when the control for the overall size of the military is included and the other controls are kept the same (e.g., comparing specification 1 with specification 2). This gap indicates that dictatorships have more conscription partly because they demand larger armies. However, dictatorship still leads to more conscription even when we add the army size control. That indicates that, in addition to demanding larger armies, dictatorships are also more likely to raise their armies using conscription. Both mechanisms are relevant.

The GCC dummy indicator tests the rentier state hypothesis. As the theory in this paper would predict, being a GCC member lowers military service by between 5 and 11 months.

The communist past dummy is not strongly associated with conscription. The effects of the legacy of communism (e.g., heavily regulated labor markets) might be fully captured by the other independent variables.

Labor market regulation is strongly associated with longer military service. The model estimates that an increase from the most flexible to the most heavily regulated labor market increases military service by about five months. This result always passes the statistical significance threshold. The finding is consistent with the predictions of the theory advanced in the paper. The alternative indicator, common law, is also consistently

associated with less conscription. I argued earlier that common law is a proxy for labor market deregulation.

The arguments that stress ideological foundations of conscription generate predications that are inconsistent with the evidence. As I stated above, the effect of democracy is the opposite of that predicted by ideological commitment to democracy/egalitarianism arguments. The relationship between nationalism, ethnic homogeneity, and conscription is weak. The effects of the two indicators are contradictory. Both ethnic diversity (a measure of a lack of nationalism) and national pride lead to less conscription. The ethnic diversity effect is generally stronger and more robust than the national pride effect, which indicates that the overall relationship between nationalism and conscription is positive. Results from additional specifications which illustrate this claim further are available upon request. Furthermore, the nationalism/diversity effect is usually far from statistical significance, and it only occasionally has a substantively relevant effect.

A positive association between nationalism and conscription (or a negative association between a lack of nationalism and conscription) is consistent with the claim that people are instrumental rather than moral or emotional nationalists. Rather than leading them to volunteer for the army, nationalism may affect their support for conscription as a mechanism that insures that others will participate as well. The relative weakness of this effect and its seeming inability to overcome some contradiction indicates that this dynamic plays only a supporting role. This is consistent with the claim that the dynamics involving the provision of selective incentives matter more.

The final effect of interest is that civil war tends to hinder conscription. While this effect is not consistently statistically significant, it tends to be negative.

Not surprisingly, the size of the military is a powerful predictor of the required length of military service. The causation is likely to go in both directions and I introduce this control less out of interest in its coefficient and more in order to hold the size of the military constant.

The final two specifications examine the question of whether there is more conscription in pure democracies than in mixed systems. As I argue above, this is a possible interpretation of Levi's (1997) argument. I use the Freedom House indicator

here because its structure is well suited to examining mixed systems. I only use data from countries coded by the Freedom House as free or partly free (FH scores of five or less).

Conscription Determinants: Democracies, 1990s		
	logit	OLS
DV:	(1) dummy	(2) length
Dictatorship (FH)	3.045 (0.92)	8.813 (0.93)
Borders	0.658** (2.59)	0.659 (1.51)
Common Law	-3.023*** (3.22)	-6.678** (2.33)
Population (log)	0.051 (0.19)	-0.127 (0.15)
GDP per capita (\$1,000)	0.0135 (0.28)	-0.062 (0.52)
Ethnic Diversity	-1.405 (0.86)	-2.752 (0.67)
Civil War Dummy	-0.987 (1.08)	-1.163 (0.69)
Communist Past	0.255 (0.24)	2.17 (0.88)
n	86	86
pseudo r sq./r sq.	0.4613	0.2351

Coefficients with t and z statistics in parenthesis.

\*\*\* - significant at 99%; \*\* - significant at 95%; \* - significant at 90%

The results are inconsistent with the claim linking pure democracy with conscription. Moving towards authoritarianism increases conscription even if the pure authoritarian states are removed from the analysis.

#### **iv. Regression Results: Historical Data**

The following regressions examine panel data from between 1850 and 2000. I again examine the determinants of conscription as measured by the dummy indicator as well as the length of service. The results are as follows:

Determinants of Conscription, 1850-2000. DV: Conscr. Dummy				
	Gaussian	Gaussian	Gaussian	Fixed Effects
	1	2	3	4
Democracy (Polity)	-2.4*** (9.2)	-1.34*** (4.49)	-5.66*** (8.31)	-3.48*** (8.12)
Borders	0.255*** (5.93)	0.301*** (5.81)	0.193* (1.95)	0.27*** (2.69)
Population (log)	0.516*** (7.1)	0.403*** (4.97)	-0.633*** (4.26)	2.324*** (9.66)
Urbanization	2.769*** (4.61)	0.096 (0.15)		-1.781* (1.9)
GDP per capita (\$1,000)			0.615*** (8.67)	
Interstate War	0.673*** (4.76)	0.128 (0.77)	1.103*** (4.3)	0.797*** (5.2)
Civil War	-0.133 (0.58)	-0.028 (0.11)	-0.458 (0.76)	-0.137 (0.52)
Soldiers/population (log)		1.864*** (16.88)		
n	6727	6428	1935	2363

Coefficients with z statistics in parenthesis.

\*\*\* - significant at 99%; \*\* - significant at 95%; \* - significant at 90%

Determinants of Conscription, 1850-2000. DV: Conscription Length							
	Between Effects	Between Effects	Between Effects	Fixed Effects	Fixed Effects	Gaussian	Gaussian
	1	2	3	4	5	6	7
Democracy (Polity)	-11.2*** (2.65)	-8.88** (2.29)	-18.52** (2.22)	-12.16*** (15.83)	-11.58*** (14.46)	-12.26*** (16.23)	-11.52*** (14.7)
Borders	1.098 (1.65)	0.963 (1.58)	1.966* (1.95)				
Population (log)	1.228 (1.18)	2.177** (2.22)	4.113* (1.8)	2.044*** (3.89)	1.341** (2.4)	2.062*** (4.61)	1.612*** (3.54)
Urbanization	1.767 (0.19)	-18.6** (2.04)		-16.372*** (6.46)	-18.494*** (6.9)	-15.59*** (6.81)	-18.98*** (7.97)
GDP per capita (\$1,000)			0.981 (0.7)				
Interstate War	20.274*** (3.83)	9.76* (1.86)	2.553 (0.37)	3.124*** (6.33)	2.699*** (5.28)	3.317*** (6.76)	2.86*** (5.62)
Civil War	0.241 (0.05)	0.518 (0.11)	-17.948** (2)	1.476** (2.17)	0.9 (1.29)	1.413** (2.1)	0.853 (1.24)
Soldiers/population (log)		8.201*** (5.3)			2.368*** (7.42)		2.656*** (8.56)
n	4542	4347	1018	4666	4459	4666	4459

Coefficients with z statistics in parenthesis.

\*\*\* - significant at 99%; \*\* - significant at 95%; \* - significant at 90%

Democracy leads to less conscription. The models estimate that going from a most authoritarian to the most democratic state reduces the required military service by about a year. In addition to being substantively important, the effect is also always highly statistically significant. The consistency of the effect across the different specifications with fixed, between, and Gaussian effects further illustrates its robustness. The effect matters both across space at a point in time, and across time while holding a country constant. As in the regressions that use modern data only, the democracy effect is somewhat weaker when the control for army size is introduced.

An additional land border is estimated to add an additional month to two months of service. The effect is generally statistically significant, but more so when the dependent variable is in the dummy form. This parallels the more robust effect of borders on the dummy form of the dependent variable in the regressions that use the modern data.

A larger population usually leads to more conscription. This is consistent with the Mulligan-Schleifer (2005) argument.

In most specifications where the length of service is the dependent variable, urbanization has a large negative effect. This is not the case in the specifications on the conscription dummy. Replacing urbanization with the GDP per capita strengthens the democracy effect. It is not clear whether this is due to a reduction in measurement error or due to a reduced number of observations and the altered sample. The effects of the key explanatory variables, regime type and borders, hold up to both controls.

Not surprisingly, interstate war is strongly linked with more conscription. More interestingly, the effect of civil war is less straight-forward. Civil war has a negative effect on the conscription dummy that is not statistically significant. The effect on the length of service varies widely across the different specifications.

What happens if we examine data from democracies and partial democracies only? In the next set of specifications I only use data from countries with polity scores of zero or higher.

<b>Determinants of Conscription: Democracies Only (Polity Score 0 or higher), 1850-2000</b>				
DV:	Dummy	Dummy	Length	Length
	Gaussian	Gaussian	Gaussian	Gaussian
1850-2000	1	2	3	4
Democracy (Polity)	-2.47*** (5.92)	-2.17*** (4.31)	-12.56*** (13.01)	-12.12*** (12.29)
Borders	0.498*** (8.84)	0.52*** (8.49)		
Population (log)	0.077 (0.76)	-0.307** (2.3)	2.258*** (5.63)	1.062** (2.52)
Urbanization	1.1 (1.19)	-0.433 (0.37)	-9.682*** (4.01)	-9.045*** (3.68)
Interstate War	1.212*** (6.15)	0.44* (1.87)	3.166*** (7.42)	2.452*** (3.78)
Civil War	-0.936*** (2.65)	-0.912** (2.49)	2.908*** (4.54)	2.28*** (5.13)
Soldiers/population (log)		2.148*** (14.19)		2.525*** (9.54)
	3180	2974	2242	2110

Coefficients with z statistics in parenthesis. \*\*\* - significant at 99%; \*\* - 95%; \* - 90%

The results indicate that pure democracies have much less conscription than partial democracies: the military service in the former is shorter by about a year. The results are highly statistically significant. This pattern is consistent with that obtained by analyzing modern data alone. It contradicts the claim that, among democracies, it is easier for the ones with more purely democratic institutions to maintain conscription.

## V. Conclusion

The principal determinants of conscription are the international threat environment partly determined by the number of land borders, regime type, and the extent of labor market regulation. By contrast, loyalty to democracy or to a nation is not a strong determinant of conscription. The results of econometric analysis using both modern and historical (1850-2000) data is consistent with these claims. Overall, the results indicate that conscription is driven more by necessity, efficiency, and self-interest than by loyalty or issues of identity.

An important policy implication of the argument is that political and economic liberalization lead to a reduction in the citizens' obligations to the state in the military realm. If the current trend towards globalization, which has included democratization and labor market deregulation, continues, we should expect further decreases in conscription across nations.

## Works Cited

Alesina, Alberto and Arnaud Devleeschauwer, William Easterly, Sergio Kurlaut, and Romain Warciarg. 2003. "Fractionalization." *Journal of Economic Growth*, 8, 1855-1894.

Alesina, Alberto, Reza Baqir, and William Easterly. 1999. "Public Goods and Ethnic Divisions." *The Quarterly Journal of Economics*.

*Appleton's Annual Cyclopedia and Register of Important Events*. 1868-1903. D. Appleton & Company.

Armada. (2006). In *Encyclopædia Britannica*, from Encyclopædia Britannica Online, <http://search.eb.com/eb/article-9009497>.

Barnard, Henry. 1892. *The American Journal of Education*. F.C. Brownell.

Beukema, Hermann. 1982. "The Social and Political Aspects of Conscription: Europe's Experience." In: *The Military Draft: Selected Readings on Conscription*, edited by Martin Anderson with Barbara Honegger, 479-91. Hoover Institution Press.

Boix, Carles. Forthcoming. *The Birth of Party Democracy*.

Botero, Juan, Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Schleifer. 2003. "The Regulation of Labor." NBER Working Paper.

Brinton, George. 1861. *The Armies of Europe*. J.B. Lippincott & Co.

Campos, Nauro F. and Vitaliy S. Kuzeyev. 2007. "On the Dynamics of Ethnic Fractionalization." *American Journal of Political Science*.

Cheibub, Jose Antonio, and Jennifer Gandhi. 2004. "Classifying Political Regimes: A Sixfold Classification of Democracies and Dictatorships."

Choi, Seung-Whan and Patrick James (2003). "No Professional Soldiers, No Militarized Interstate Disputes? – A New Question for Neo-Kantianism." *Journal of Conflict Resolution*, Vol. 47, No. 6.

Cohen, Eliot A. 1985. *Citizens and Soldiers. The Dilemmas of Military Service*. Cornell University Press.

Crystal, Jill. 1990. *Oil and Politics in the Gulf: Rulers and Merchants in Kuwait and Qatar*. Cambridge University Press.

Denney, Etienne. 1941. "Democracy and the French Army." *Military Affairs*, Vol. 5, No. 4. , pp. 233-240.

Dilke, Charles W. 1891. "Statistics of the Defence Expenditure of the Chief Military and Naval Powers." *Journal of the Royal Statistical Society*, Vol. 54, No. 1., pp. 1-30.

Dolmas, Everett Carl. 2004. *The Warrior State. How Military Organization Structures Politics*. Palgrave Macmillan.

Dowty, Alan. 1987. *Closed Borders: the Contemporary Assault on the Freedom of Movement*. Yale University Press.

Easterly, William, and Ross Levine. 1997. "Africa's Growth Tragedy: Policies and Ethnic Divisions." *The Quarterly Journal of Economics*, Vol. 112, No. 4.

Friedman, Milton. 1967. "Why Not a Volunteer Army?" *New Individualist Review* 3-9.

Gause, Gregory. 1994. *Oil Monarchies: Domestic and Security Challenges in the Arab Gulf States*. Council on Foreign Relations Press.

Gleditsch, Kristian Skrede. 2004. "A Revised List of Wars Between and Within Independent States, 1816-2002." *International Interactions*, 30:231-262.

Gooch, J. 1980. *Armies in Europe*. Routledge & Kegan Paul.

Graham, Robert A. 1945. "Universal Military Training in Modern History." *Annals of the American Academy of Political and Social Science*, Vol. 241.

Hirschman, Albert. 1970. *Exit, Voice, and Loyalty*. Harvard University Press.

Huntington, Samuel P. 2004. *Who Are We? The Challenges to America's National Identity*. Simon and Schuster.

Japan. (2006). In *Encyclopædia Britannica*, from Encyclopædia Britannica Online: <http://search.eb.com/eb/article-23146>

Joenniemi, Perti., ed. 2006. *The Changing Face of European Conscription*. Ashgate.

Keegan, John, ed. 1979. *World Armies*. MacMillan.

Knight, Charles. 1870. *The English Cyclopædia*. Bradbury, Evans, & Co.

Kovacs, Arpad F. 1946. "French Military Institutions before the Franco-Prussian War." *The American Historical Review*, Vol. 51, No. 2., pp. 217-235.

Lanning, Michael Lee. "The Top Ten Battles of All Time." <http://www.historyplace.com/worldhistory/topten/index.html>. Based on *The Battle 100: The Stories Behind History's Most Influential Battles*.

Leander, Anna. 2004. "Drafting Community: Understanding the Fate of Conscription." *Armed Forces & Security*, vol. 30, no. 4, pp. 571-599.

Lee, Dwight, and Richard McKenzie. 1992. "Re-examination of the Relative Efficiency of the Draft and the All-Volunteer Army," *58 Southern Economic Journal* 644-54.

Levi, Margaret. 1997. *Consent, Dissent, and Patriotism*. Cambridge University Press.

MacCulloch, John Ramsey and Frederick Martin. 1866. *A Dictionary Geographical, Statistical and Historical, of the Various Countries, Places, and Natural Objects in the World*. Longmans, Green & Co.

Maddison, Angus. 1995. *Monitoring the World Economy, 1820-1992*. Organization for Economic Cooperation and Development.

Mann, Michael. 2005. *The Dark Side of Democracy*. Cambridge University Press.

Mearsheimer, John. 2001. *The Tragedy of Great Power Politics*. Norton.

Medina, Luis Fernando. 2005. "The Comparative Statics of Collective Action: A Pragmatic Approach to Games with Multiple Equilibria." *Rationality and Society*.

Morse, Adair, and Sophie Shive. forthcoming. "Patriotism in Your Portfolio"

Mulligan, Casey, and Andrei Schleifer. 2005. "Conscription as Regulation," *American Law and Economics Review*, Volume 7, No. 1.

Mulligan, Casey, Ricard Gil and Xavier Sala-i-Martin. 2004. "Do Democracies Have Different Public Policies than Nondemocracies?" *Journal of Economic Perspectives*. 18(1).

Munger, Michael. forthcoming. "Preference Modification vs. Incentive Manipulation as Tools of Terrorist Recruitment: the Role of Culture."

Ng, Pak Shun, and Casey Mulligan. 2004. "Measuring Conscription around the World," manuscript, University of Chicago.

- Nikolaieff, A. M. 1949. "Universal Military Service in Russia and Western Europe." *Russian Review*, Vol. 8, No. 2., pp. 117-126.
- Olson, Mancur. 1971. *The Logic of Collective Action. Public Goods and the Theory of Groups*. Harvard University Press.
- Posen, Barry R. 2002. "The Best Defense," review of *The Tragedy of Great Power Politics*, by John Mearsheimer, New York: W.W. Norton, 2001, in *The National Interest*, Spring 2002, 119-126.
- Posen, Barry R. 1993. "Nationalism, the Mass Army, and Military Power," *International Security*, Vol. 18, No. 2.
- Prasad, Devi, and Tony Smythe. 1968. *Conscription: a World Survey: Compulsory Military Service and Resistance to It*. War Resisters' International
- Przeworski, Adam, Michael E. Alvarez, Jose Antonio Cheibub, Fernando Limongi. 2000. *Democracy and Development*. Cambridge University Press.
- Rogowski, Ronald. 2005. "Distributional Consequences of Globalization." Memorandum for the Conference on the Political Economy of Globalization, Princeton, NJ.
- Rosengarten, Adolph G. Jr. 1981. "The Evolution of French Military Manpower Policy from 1872 to 1914." *Military Affairs*. Vol. 45, No. 4., pp. 180-186.
- Ross, Thomas. 1994. "Raising an Army: A Positive Theory of Military Recruitment," 37, *Journal of Law and Economics* 109-31.
- Rowe, Michael. 2003. *From Reich to State: the Rhineland in the Revolutionary Age*. Cambridge University Press.
- Schaefer, Christina K. 1998. *The Great War: A Guide to the Service Records of All the World's Fighting Men and Volunteers*. Genealogical Publishing Com.
- Schelling, Thomas C. *Micromotives and Macrobehavior*. 1978. W.W. Norton & Company, Inc.
- Smith, Tom W. and Lars Jarkko, 2001. "National Pride in Cross-National Perspective." University of Chicago National Opinion Center Working Paper.
- War Resisters' International. 1998. *Refusing to Bear Arms: A Worldwide Survey of Conscription and Conscientious Objection to Military Service*. London: War Resisters' International.

Warner, John, and Beth Asch. 1996. "The Economic Theory of a Military Draft Reconsidered." 7 *Defense and Peace Economics* 297-311.

Zurcher, Erik J., ed. 1999. *Arming the State: Military Conscription in the Middle East and Central Asia, 1775-1925*. St. Martin's Press