Tug of War: Government-Military Power Struggles and International Conflict*

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Abstract

This paper investigates the effect of domestic power sharing between a government and its military on a state's propensity for international conflict. It uses a simple model of domestic political interactions in which the government and military have common interests in the state's security and conflicting interests over the distribution of domestic benefits. An activity available to the military has a chance of helping or harming the state's security, and whether the expected outcome is positive or negative is known only to the military. The model shows that steps by the government to consolidate domestic power can lead the military to engage in activity that is more likely than not to harm the state's security, although, without the pressures of domestic politics, it would prefer to refrain from the activity. The paper thus elucidates a mechanism by which states with substantial domestic power sharing between governmental and military leaders have a greater propensity for international conflict.

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1 Introduction

Most recent theories of domestic politics and war assume that elites other than the top leadership act as "audiences" when it comes to international relations; they influence their countries' entry into conflict primarily, if at all, through their ability to punish the top leadership for taking, or failing to take, particular actions (Fearon 1994). Nevertheless, elites outside of the top leadership often make decisions that impact international relations directly; which elites have this ability and which decisions they control depends on the issue area as well as the state in question. Scholarship has begun to show the impact of this agency. For example, Schultz demonstrates that democratic legislatures' public support for the use of force helps to signal their states' resolve to fight to adversaries, Brooks shows that the preferences of military leaders impact the process of strategic assessment, and Bautista-Chavez demonstrates that U.S. bureaucrats help to create agreements with Mexico to promote cooperation on migration policy. (Schultz 1998; Brooks 2008; Bautista-Chavez 2020).

The military typically is in a unique position to influence states' entry into international conflict, or lack thereof, directly, because military leaders hold a great deal of domestic power and control decisions that impact international security, such when and where to move troops or hold exercises (Dassell and Reinhardt 1985, 57). Even in states with strong governmental control over the military and in states in which generals control the government, the military as an institution has some separate control over policy and over its own actions. (Nix 2012; Weeks 2014; White 2017) For example, the United States is usually considered a state with strong civilian control. However, General Milley, the Chairman of the Joint Chiefs of Staff, reportedly called his Chinese counterpart twice during the waning days of the Trump administration to reassure him about U.S. intentions (Schmidt 2021). However, few works on the causes of war address the possibility that the military is an independent actor, rather than an audience, and the theory of when and why the military influences states' entry into conflict remains poorly developed.

This paper argues that the structure of government-military relations affects top officers' interest in engaging in military activities that increase the chances of conflict. The government's leadership typically prefers to decrease the military's share of the benefits of office, including control over policy and material benefits; this change is unwelcome to the military. The prospect that the government will consolidate power at their expense creates an incentive for military leaders to engage in activities that increase the chances of international conflict, because doing so can remind the government's leadership of the military's impor-

tance for security and to convince the government to maintain the current level of domestic power sharing. While these incentives exist in any country that has both government and military institutions, the resulting power struggle is likely to be stronger, and to have a more observable affect on international tensions, in countries and times in which government leaders and military institutions share power fairly equally, so that both sets of actors have the ability to take substantial independent action. As the paper discusses later, such countries may be democratic, such as Pakistan in the late 1980s and 1990s, or autocratic, such as Egypt in the mid-1960s, though they rarely are extremely democratic.

The paper develops this argument using a game-theoretic model in which the government and the military begin an interaction in a domestic power-sharing arrangement. The two actors have a conflict of interest over the distribution of domestic control, but share interests in their country's international security; the weight that each leadership places on the country's security versus its own share of domestic power can vary. The government may take an imperfectly observable step to consolidate domestic power, and the military may engage in military activity that, if successful, convinces the government that the military is too important to be forced out of the power sharing arrangement.

Beyond explaining how domestic power struggles can lead to international conflict, the theory helps to explain the timing of such conflict by showing that civilian purges of the military and other actions that prepare for domestic consolidation of power increase the likelihood of destabilizing activity by the military that attempts to prevent such consolidation. It also helps to explain why more professionalized militaries seem to have less of a say in running their governments. A more professionalized military, one that values doing its job well more (here, one that values the state's security more), and the spoils of office less, is less likely to take military action to push back against perceived attempts by the government to consolidate power, and is thus less likely to prevent government consolidation.

The theory brings together aspects of the literature on comparative authoritarianism and the literature on the domestic sources of international conflict. Svolik (2012) argues that authoritarian leaders in domestic power-sharing arrangements have an incentive to consolidate power at the expense of the elites with whom they share power. This paper argues more specifically that, regardless of domestic regime type, government leaders who share power with military institutions have an incentive to consolidate power at their expense. Diversionary war theorists explain that state leaders may start international conflicts to divert attention from their state's domestic problems. This paper argues that leaders of the military institution sometimes may increase international tensions to draw attention to the

crucial role played by their institution in defending the state.¹

By focusing on domestic power struggles, this paper broadens our understanding of government-military relations in provoking international conflict. The existing literature on civil-military relations addresses this issue almost entirely by focusing on whether members of the military have a greater or lesser overall preference for the use of force than do their civilian counterparts (Feaver and Gelpi 2004; Horowitz and Stam 2014; Sechser 2004; Weeks 2014); some works argue that a military preference for the use of force leads states with greater military control over the state to a greater tendency toward international conflict (Sechser 2004; Weeks 2014).² In contrast, this paper focuses on a complementary channel, how the competition between government and military leaders for domestic power affects the state's propensity to become involved in conflict. To highlight this new mechanism, this paper assumes that military and government leaders share security preferences. Since this assumption is not essential to the argument, both theories may be operative.

The model that the paper develops is a version of a deterrence model (e.g., Morrow (1994) [57]), though the military is deterring its government from always consolidating power rather than an adversary from always attacking. The model follows Svolik (2012) [Chapter 3] in assuming that the second player, in this case, the military, receives a noisy signal of the government's action; this is a good way to model government steps to consolidate power, which, as the paper explains later, are imperfectly observable. Unlike in Svolik's model, the government here has both congruent and divergent interests with the other actor (here, the military), represented in the payoff functions. This new part of the model is critical to this paper's study of how domestic power struggles (in which the government and the military have divergent interests, each desiring more power) affect international security (in which the actors share an interest in enhancing their country's security). This incentive structure creates balancing acts for the government and for the military. The government balances its desire to consolidate power against the risk of provoking the military into an activity that is likely to turn out badly from a security standpoint. The military, when it does not have an available activity that is likely to enhance the state's security, balances the possibility that even an unpromising action may succeed, persuading the government not to consolidate

¹A particularly relevant paper in this literature is Dassell and Reinhardt (1985), which argues that leaders' ability to engage in diversionary war is determined by whether or not the military have an interest in going along with their plan. This paper argues that the military may benefit from conflict – or at least from an increase in international tensions – even when the government does not, and that the military may engage in activity that increases the chances of conflict because it is trying to decrease, rather than to increase, the government's domestic power.

The literature on diversionary war is large; see Butcher (2021) for a recent review.

²Brooks (2008) considers the role of the domestic balance of power between civilian and military leaders in affecting strategic assessment, which, in turn, can affect entry into international conflict.

power as well as enhancing the country's security, against the greater likelihood that it will fail, both harming the country's security and failing to forestall a consolidation of power. The extent that each actor values the congruent interest in security versus the divergent interest in domestic power affects equilibrium outcomes.

The paper proceeds in five main parts. The first discusses key assumptions of the model and explains the paper's use of the term "military professionalism." The second presents the game-theoretic model; the third presents its equilibria and the fourth its implications. The fifth presents a brief illustrative case study on the Kargil War, and the sixth concludes. An appendix contains equilibrium analyses.

2 Key Assumptions

This paper seeks to understand the effect of the structure of government-military relations on a state's propensity to enter international conflict. This section discusses six key assumptions of the model, and one assumption outside the model that the paper uses to draw implications about international conflict from a model about domestic politics. It also explains what the paper means when it refers to "military professionalism," and why it does not focus on the military's decision to launch a coup.

2.1 Governmental and Military Leaderships Share the Benefits of Domestic Office.

The model's first assumption is that civilian and military leaders share the benefits of domestic office. These benefits include control over policy and/or material benefits. For example, military leaders typically have some control over decisions involving military policy and personnel.

While all states that have militaries have some military involvement in politics (White 2017), states vary considerably in the extent of this involvement. The domestic balance of power affects government and military leaders' share of the benefits of office. In the U.S., known for its strong government control over the military, Nix argues that the military's political power is most apparent during budget battles (Nix 2012, 91). In states with weaker governmental control, or greater military power, the military generally has an independent power base, stronger control over policy, and a greater share of material benefits of office. For example, Egyptian President Gamal Abdel Nasser shared power substantially with General Abdel al-Hakim Amer, the head of the Egyptian military. As Brooks notes, "Amer was

the head of a pervasive and influential faction within the military. Nasser drew support in varying degrees from the professional classes, small rural landholders, and urban workers and had created a powerful constituency within the Egyptian Left and, to a lesser extent, the Right" (Brooks (2008) [76]; see also Svolik (2012) [58]). Amer's officers were able to import cars and refrigerators for themselves, contrary to regulations, and generally to live more luxuriously than their civilian colleagues (Parker (1993) [125]).

Militaries hold substantial domestic power in some autocracies and some democracies. President Nasser of Egypt was a general and an autocratic ruler. Another example of substantial power sharing occurs in the Kargil War case discussed later; after the death of President Zia ul_Haq of Pakistan in a plane crash, subsequent, democratically elected Pakistani Prime Ministers Benazir Bhutto and Nawaz Sharif each shared power with the military (Khan, Lavoy, and Clary 2009, 83).

2.2 Governmental and Military Leaders Value Domestic Office-Holding, Leading to Divergent Interests.

The model's second assumption is that both civilian and military leaders value the benefits of office; this assumption is similar to the assumption in models of democratic politics that politicians value office-holding. The value that leaders place on holding domestic power leads to divergent interests. Because the government does not start with the full benefits of domestic office, it desires to consolidate power at the military's expense. All else equal, the government has a stronger incentive to consolidate power when it begins with less power, and so has more to gain. At the same time, since the military also values domestic power, it has an incentive to take action to stop the government from consolidating power.

2.3 Both Leaderships Value the State's Security, Leading to Common Interests.

The model's third assumption is that both the civilian and military leaderships value the country's international security. The military values international security because providing security is its mission, and members of the military are, at least in part, chosen for and socialized into a desire to fulfill this mission. The civilian government values security because, at an extreme, the state it governs would not exist without it. Decreases in security also can decrease the government's prestige and its public support.³

³This assumption is comparable to an assumption in a purely democratic context that politicians care about the welfare of the state in addition to office holding.

The model incorporates common interests in security by assuming that if the outcome of the military's activity is positive, both leaderships gain from that outcome, and if not, both leaderships are worse off. In making this assumption, the model also assumes that civilian and military leaders agree on whether or not the country's security was improved or harmed by an activity after its consequence is known.

2.4 The Government Can Consolidate Domestic Control.

The model's fourth assumption is that the government can take steps to consolidate control; for example it may replace top military officers, as in the Kargil War case discussed later. Moreover, if it does take such steps, it can consolidate power completely unless the military convinces it not to do so. The assumption that government consolidation of power results in its sole enjoyment of the benefits of office (complete control over policy making and material benefits), with none reserved for the military, is a simplification of a reality in which the government can reduce the military's role in policy making and/or the military's share of the material benefits of office.

2.5 The Military Can Engage in Activity that Increases the State's Chances of International Conflict and Has Some Potential to improve the Country's Security.

The model's fifth assumption is that the military is able to initiate activity that increases international tensions and therefore the state's probability of involvement in international conflict; the activity may or may not be likely to improve the state's security, but has some chance of doing so. For example, the military may move forces near a border or, in some polities, may even have the ability to send them across.

Those military activities that involve major powers, are more dramatic or have more-dramatic outcomes are more likely to be recorded by news sources and studied by historians than those that are more quotidian. For example, Egyptian General Amer may have made the final decision to send troops to the Sinai in the 1967 crisis with Israel (Parker (1993) [62], Brooks (2008) [90]). When a military moves forces internally, on the other hand, that decision may not be publicly recorded, though a neighboring state's leaders may notice. Thus, the less-dramatic incidents that the model helps to explain are difficult to observe in case studies. Nevertheless, as discussed later, the model also has implications about the broader pattern of international conflict.

In theory, governments of states that have strong civilian control over the military could prevent the military from initiating such activity.⁴ In practice, scholars often debate the existence of strong civilian control over the military in a particular state; even when it exists, it may not completely preclude independent activity by the military. For example, Scobell (2005) [228] calls civilian control over the military in China in the early 2000s "weakly institutionalized." Feige (2014) suggests that, "[i]ncidents such as the surprise stealth fighter test during former U.S. Secretary of Defense Robert Gates' visit in 2011, or the 2007 anti-satellite test, are prime examples of the CCP's leadership being seemingly unaware of what its military is doing." Thus, domestic power struggles might increase the chances of international conflict in a wide variety of states, though they should be less likely to do so in states that truly have strong governmental control.

2.6 Successful Military Activity Undermines a Government Attempt to Consolidate Domestic Control.

The model's last key assumption is that military activity can undermine a government's plans to consolidate power. Military activity can convince the government not to follow through on plans to consolidate power for three related reasons. First, the government needs a strong military to provide for security. By increasing tensions, military activity can increase the country's need for protection; it also reminds the government of the military's importance. Second, military activity increases the military's salience to civil society and can increase its popularity, leading the government to believe that pushing the military out of power would be unwise. Third, successful military activity increases both the government's and society's belief in the military's competence.⁵

Military activity need not always be successful in order to make the government more reluctant to consolidate power. Particularly if seen as a response to an adversary, even unsuccessful action can lead to an outpouring of nationalism. Moreover, even an unsuccessful action can increase the chances of conflict, thus increasing the state's reliance on the military. While public trust is an imperfect indicator of the military's ability to forestall consolidation, trust in the military in the former Federal Republic of Yugoslavia rose after NATO air strikes

⁴In states with strong civilian control over the military, relations between the government and the military may ressemble a pricipal-agent relationship, in which the government has greater ability to constrain military activity through the threat of punishment (Feaver 2003).

⁵The argument that the military can use its activity to undermine government attempts to consolidate power builds on arguments in the diversionary war literature about why the government can use military action to divert attention from its government's domestic problems. See, for example, Oakes (2006) [434-4]. It seems at least as likely that the military would get credit for military successes as that the government would get such credit.

in the Spring of 1999 and Yugoslavia's subsequent defeat. On the other hand, unsuccessful action sometimes decreases trust in the military; there is evidence that trust in the Russian military has risen and fallen with its successes and failures (Malešič and Garb 2018, 152).

Particularly with minor activities, whether the activity was helpful or harmful to security may be difficult to discern, and the military may be able to spin it as helpful. What is important for the model, however, is that the military sometimes does not have an activity available that is likely to enhance the country's security in an appreciable way.

Because the impact of unsuccessful activity seems to vary, the model that follows thus assumes that only successful military action undermines government consolidation of power. As a simplification, the model assumes that successful military action precludes government consolidation, while in practice it only decreases its viability as a government strategy.

2.7 The Weight that the Military Places on Security Versus Domestic Control is A Key Component of Military Professionalism.

The model allows the weights that a given actor (governmental or military) places on international security versus domestic power to vary. That is, civilian and military leaders value both international security and domestic power, but a leadership may value security more and domestic power less, or vice versa. The weight that the military places on security captures one piece of Huntington's concept of professionalism, and is what the paper means when it refers to "military professionalism." Huntington argues that military professionalism is maximized in an institutional setting in which the military remains separate from the political system and focuses on developing expertise in military matters, a setting that he calls "objective control" (Huntington 1957, 11). By this definition, the military is more professionalized when it places greater weight on the state's security, and lesser weight on the benefits it receives from participating in governing the country.

The analogous weights in the government's utility function does not correspond as neatly to greater or lesser professionalism by the government. The government's job is to both provide for domestic well-being and to secure the state from aggression. For some governments, a greater emphasis on domestic power corresponds to a desire for personal gain. For other governments, an emphasis on domestic power corresponds to a desire for more civilian control over the military, which in turn can be an important component of democracy.

⁶The model's representation of the role of military professionalism is again a simplification. For example, professionalized militaries also are more likely to be more highly trained and more effective in promoting the country's security. See White (2017), Cloughley (1999) [347].

2.8 Coups are an Option, but Not the Outcome of Interest Here.

Another tool available to military leaders is the coup d'état. The model excludes coups for two main reasons. First, coups are not this paper's outcome of interest; adding coups complicates the model and makes it less useful in other ways. Second, coups are likely to be a second choice for militaries faced with government consolidation of power. While actions such as purges of the military can harm the country's security, thus perhaps making a coup more appealing, militaries often can choose security-related activities, such as flying a fighter plane into another country's airspace, that increase the chances of conflict and of a very bad outcome only slightly. Coups, on the other hand, always carry high risks for those participating. Failed coups frequently result in exile, imprisonment, or death for the leaders, and in de Bruin's data, they failed more often that they succeeded (De Bruin 2020, 18, 47). Frequent coups are not a constant across periods; in De Bruin's data; for example, there were approximately twenty attempts in 1980, but most years from 2000-2010 saw less than 5 (De Bruin 2020, 47). Nevertheless, when military leaders believe they have a high probability of succeeding in a coup and a low probability of a successful military activity, they may launch a coup in result to government attempts to consolidate power, outside the purview of this model. In the Kargil war case, Pakistan's military does just that when its military activity fails.

Taken together, the assumptions discussed in this section describe a state in which civilians and military share domestic power, though the domestic balance of power varies by state and time period. Both the civilian government and the military organization value the power that they have, but they also value the state's security. These interests result in a balancing act. When the military believes the government is preparing to consolidate power, it has an incentive to engage in military activity even when it believes that activity is more likely than not to hinder the state's security, because if the activity turns out well it can persuade the government not to follow through on the preparations. However, if the military engages in activity that turns out badly for the state – for example, it tries to take an adversary's border post and fails – the action may both fail to stop the government consolidation and make the military worse off by making the state less secure. At the same time, the government has an incentive to prepare to consolidate power, but it does not want to encourage the military to observe those preparations and take ill-advised military action in response.

The next sections of the paper explore these dynamics with the aid of the formal model.

3 A Model of Government-Military Power-Sharing and International Tensions

The game-theoretic model considers an interaction between a government (G) and military (M) leaders who share in governing a state. The interaction is domestic, but, as discussed earlier, any military activity increases the chances of conflict with another state. Since both actors value domestic power and international security, their payoffs depend upon the domestic power balance at the end of the interaction, and on whether any military activity helped or hindered the country's security. These, in turn, are determined by the government's and the military's strategies. The government's choice in the game is whether or not to prepare to consolidate power. Each actor's share of control over the benefits of office remains at the status-quo level unless the government consolidates power. The government has the option to consolidate power at the end of the game only if it first prepares; if it does prepare, the model assumes that it consolidates power at the end of the interaction unless the military has engaged in successful activity, which convinces the government to change its plan. The military's choice is whether or not to engage in military activity. If the military engages in activity and that activity is successful, the activity adds to the security portion of both leaderships' utility, and also maintains the domestic status quo by convincing the government not to consolidate power if it has prepared to do so. If the military engages in activity but the activity is unsuccessful, however, the activity subtracts from the security portion of both leaderships' utility and fails to prevent the government from consolidating power if the government has prepared to do so.

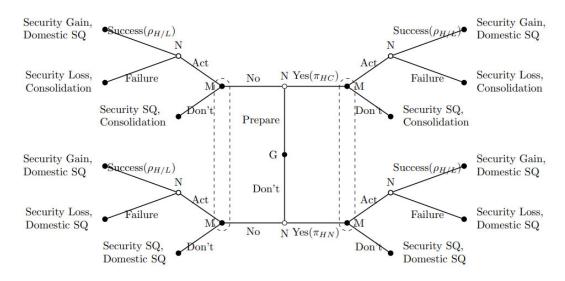
The rest of this section describes the model more formally.

3.1 Actions and Information

While the first observable action of the model, shown in Figure 1, is the government's, the model begins with Nature choosing determining a type for the military. This type represents the likely security consequences of the best activity that the military has available at this time. The military observes Nature's choice and learns that the activity available to it either is or is not promising from a security standpoint.⁷ On average, a promising activity improves the state's international security and an unpromising one makes it worse. Formally, Nature

⁷Since the military's job is to protect the state's international security, it is realistic to assume that it knows more about the security consequences of a military action than does the government. Military leaders gain private information about military matters because the military bureaucracy reports most directly to them. They also have personal expertise; their training is military-related and they spend much or most of their time on military matters.

chooses a type $\theta_M \in \{\theta_L, \theta_H\}$ for the military, where "H" represents "high and "L" represents "low," and a high type means that the action is a good idea; $\theta_M = \theta_H$ with probability μ and otherwise $\theta_M = \theta_L$. When $\theta_M = \theta_H$, the probability that the military action ends well (results in a high payoff, defined later) is $p_H > \frac{1}{2}$, and when $\theta_M = \theta_L$, , the probability that the military action ends well (results in a gain in the security portion of each actor's payoff, also defined later) is $p_L < \frac{1}{2}$.



Notes:

G: Government

M: Military

 ρ depends on the military's type

The probability that Nature indicates that Gov't prepared is higher if it did so: $\pi_{HC} > \pi_{HN}$.

Figure 1: Domestic Power and International Conflict

After Nature acts, the government makes a decision about whether or not to take a step that facilitates consolidation of power; formally, it chooses $d_G \in \{0,1\}$ where $d_G = 1$ represents a decision to take the step and $d_G = 0$ represents a decision not to do so. The model assumes that the government later will be able to consolidate power only if it takes this step, which represents an action such as purging top military leaders.

Government steps to consolidate power rarely are perfectly observable, because in practice the government may take the same action for a variety of reasons. For example, the government leadership may replace top military officers because the replacements will be more loyal when the government tries to consolidate power, or simply because it has more competent candidates for the jobs. In the model, when the government has either taken the action to prepare to consolidate power, or it has chosen not to do so, Nature sends the military sees a signal $\sigma \in \{\sigma_H, \sigma_L\}$ informing it about the government's actions. The conditional probability that the signal σ is high (H) or low (L) is $\pi_{\sigma a}$, where $a \in \{C, N\}$ denotes the civilian's action of preparing to consolidate (C) and not (N). For example, π_{HC} is the probability that the military sees a high signal conditional on the government having taken a step to consolidate power. The model assumes that $\pi_{HC} > \pi_{HN}$, so that when the signal is high the military believes it is more likely that the civilian took the step towards consolidation of power than not, and when it is low it believes the military believes it is more likely that the civilian did not take the step.. The military always receives a signal but never receives a perfect signal $(0 < \pi_{\sigma a} < 1)$.

After observing Nature's signal, the military decides whether or not to engage in military activity. If the military does so, Nature determines whether the activity improved or damaged the state's security, where the activity is more likely to benefit the state's security if it is promising and more likely to harm it otherwise. Formally, the outcome of the activity is $o \in \{0, 1\}$, where an outcome of 1 signifies that the action improved the state's security and an outcome of 0 means that it damaged the state's security. When $\theta = \theta_k$ where $k \in \{L, H\}$, o = 1 with probability p_k . The model assumes $0 < p_L < \frac{1}{2} < p_H < 1$, so both types have a chance of success and neither is sure to succeed.

3.2 Outcomes and Payoffs

For both government and the military, two important questions are answered by the end of the interaction: First, has the government consolidated power, pushing the military out of participation in the government? The answer to this first question, a simple "yes" or "no" in the model, depends on whether the government takes the initial step to consolidate power and, if so, on whether the military takes successful action, precluding consolidation. Second, what is the state's level of international security? The answer to this question, whether the security situation is the status-quo, a loss, or a gain, depends on whether the military chooses to take action, and, if so, on whether or not this action is successful.

 $^{^{8}}$ This method of modeling the information received by the second player follows Svolik (2012) [63-4] and uses his notation.

⁹Before payoffs are realized, the game assumes that the government consolidates power if it has prepared to do so and the military has either refrained from activity or engaged in activity that was unsuccessful. This assumption is short-hand for an extended game in which, if the government has prepared to consolidate power, the government has an additional choice about whether or not to do so as the last choice node of the game, and has payoffs such that it prefers to do so unless the military has just taken successful action.

The actors' payoffs are shown in Table ??. Each payoff has two parts: the first comes from security, and the second from domestic office-holding. The security portion of the payoff represents the actors' common interests: for both types of officials, it depends on whether or not the military has engaged in its available activity, and if so, what the consequences were. If the military has not engaged in the activity, both government and military receive a status-quo payoff of zero. If the military has taken a successful action, each gets the security benefit s = 1. This baseline value of the security benefit is chosen so that, if an actor values security and power equally, the benefit of an improvement in security is equal to the maximum benefit of office. If the military has taken an unsuccessful action, each receives a security loss, so that s = -1.

Conceptually, $\theta = \theta_H$ represents a military that has an activity available that is likely to improve the state's security, while $\theta = \theta_L$ represents one with an activity that is likely to harm the state's security. The assumption that $p_L < \frac{1}{2} < p_H$ implies that the security portion of both actors' payoff is negative if the military takes activity that is unpromising and positive if it takes activity that is promising.

The domestic portion of the payoff represents the actors' divergent interests; each actor's domestic payoff is a linearly increasing function of the power that it holds at the end of the interaction, and a linearly decreasing function of the power that the other actor holds. If the government has not consolidated power, each actor's benefit of office is its status-quo benefit from the power-sharing arrangement that exists at the start of the interaction. The total benefit is normalized to 1, and the government begins with a share b of domestic power, so that the military begins with (1-b). If the government has consolidated power by the end of the interaction, it receives the entire benefit of office holding, 1, while the military receives no benefit of office holding. If the military has taken no action, then neither has a benefit or cost in the security realm. The assumption that the government either consolidates power completely or not at all is a modeling simplification.

While civilian and military leaders value both the state's security and their own power, the weight that a given actor puts on each of these aspects can vary. As the previous section explained, the weight that the military puts on the state's security is a key component of military professionalism. Formally, each actor $i \in \{G, M\}$ has a weight, $\gamma_i \in (0, 1)$, that it places on optimizing the state's security as opposed to the benefits of domestic office. That is, for actor i

$$U_i = \gamma_i * security + (1 - \gamma_i) * of fice.$$
 (1)

so that γ_M represents the military's level of professionalism.

Tables ?? and ?? show how equation 1 translates into the two actors' payoffs at the end of

the game. For example, if the government takes a step to prepare for consolidation (listed as "Yes" in the government action column), whether or not it later consolidates power depends on whether or not the military prevents consolidation with successful activity. The first line of each table represents an outcome in which the government takes a step to prepare for consolidation and the military takes no action to prevent it. When the actors make these choices, the government consolidates power at the end of the game. Thus, the part of the government's payoff (Table ??) that comes from domestic power is the weight it puts on domestic power $(1 - \gamma_G)$ times 1, the entire domestic power. The part of the military's payoff (Table ??) that comes from domestic power is the weight it puts on domestic power, $(1-\gamma_M)$, times zero, because it has been pushed out of office. At the same time, the security part of the payoff for each actor is its value for the status-quo, which is zero. Thus, the total payoff corresponding to "Yes" government action and "No" military action, in the first row of each table, is $\gamma_G * 0 + (1 - \gamma_G)(1)$ for the government, and $\gamma_M * 0 + (1 - \gamma_G)(0)$ for the military.

If the military takes action, but that action is unsuccessful (the second row of each table), the government still consolidates power at the end of the game, so that the part of each actor's utility that comes from domestic power is as in the previous example. In this scenario, however, since the military took unsuccessful action, each actor each receives s = -1 multiplied by the weight that it puts on the security situation, so $-\gamma_G$ or $-\gamma_M$. Thus, the payoff corresponding to "Yes" government action and "Yes/Failed" military action is $(-1) * \gamma_G + (1 - \gamma_G) * 1$ for the government, and $(-1) * \gamma_M + (1 - \gamma_M) * 0$ for the military. Finally, if the government prepares to consolidate power, the military takes action, and that action is successful (the third row of each table), then consolidation of power is precluded. Since the action is successful, each actor receives 1 multiplied by the weight that it puts on security, so γ_G or γ_M , and each receives its payoff from the domestic status quo. Weighted, this is $(1 - \gamma_G)(b)$ for the government and $(1 - \gamma_M)(1 - b)$ for the military.

This fairly simple model captures important congruent and divergent interests of government and military actors. Increasing the share of domestic power held by the government, which starts at b, makes the government better off and the military worse off. At the same time successful military activity makes both actors better off, while unsuccessful activity makes both worse off.

	Payoffs	
	Govt.	Military
Security		
Outcome		
Status quo	0	0
Mil. success	1	1
Mil. failure	-1	-1
Domestic		
Outcome		
Status quo	b	1-b
Gov't Consolidation	1	0
Total payoff=Security+Domestic; $0 < \gamma_i < 1$		
Gov't's payoff= $\gamma_G Security + (1 - \gamma_G) Domestic$		

Military's payoff= $\gamma_M Security + (1 - \gamma_M) Domestic$

Table 1: Table Caption

Equilibria of the Power-Sharing Model: How Incen-4 tives to Consolidate Power Lead to "Extra" Military Activity

The game has three equilibria, a "reaction" equilibrium, and two "domestic-deterrence" equilibria.¹⁰ Because this is a game with uncertainty, an equilibrium includes a strategy profile (a plan for how each actor will play the game) and corresponding beliefs. In all equilibria, the military always engages in activity when its option is likely to help the country's security. In the reaction equilibrium, the government always prepares to consolidate power; the military believes after any signal that the government has prepared to consolidate power, and, when the military has only an unpromising activity available, it may or may not react to the government's preparation by engaging in the activity, depending upon its level of professionalism. In the domestic-deterrence equilibria, the military deters the government from always preparing to consolidate power by engaging in military activity likely to harm the state's security more often when the government prepares to consolidate than when it does not. The two domestic-deterrence equilibria are very similar. The reaction equilibrium is a pure-strategy equilibrium, the others are mixed-strategy ones. This section discusses the logic of the equilibria before turning to a fuller discussion of their implications.

To understand equilibrium behavior, it is helpful first to consider the two actors' in-

¹⁰The Appendix characterizes the game's Perfect Bayesian Equilibria.

centives. From a purely security standpoint, the military has an incentive to engage in the available activity only when that activity is promising; by assumption the promising activity, on average, will increase the part of the military's payoff that comes from security, while the unpromising one will decrease it.¹¹

However, domestic-political considerations give the military an incentive to engage in unpromising activity. Even unpromising military activity may succeed. If the government has prepared to consolidate power, successful activity by the military convinces the government not to follow through on its plans by stressing the military's importance to the government and the country. Thus, unpromising military activity has a cost and a benefit: on average, it decreases the country's security, but it also can maintain the military's initial share of domestic power. When the military has only unpromising activity available, it balances this cost and benefit. The more likely the military believes the government is to be trying to consolidate power at its expense, the greater its incentive to engage in the unpromising activity and hope that it turns out well.

All else equal, the government prefers to govern alone, reaping the full benefits of holding domestic office. Since the model starts with civilian and military institutions sharing domestic power, governing alone requires pushing the military out of the power sharing arrangement, and this requires preparation. A government that has prepared will consolidate power if the military does not take action or its action fails, and will refrain from consolidating power but reap security gains if the military takes action that succeeds. On average, the government's payoff is lower if the military engages in unpromising military activity than if it does not, because failed activity lowers the portion of its utility that comes from security and successful activity prevents it from consolidating power. Thus, the government balances its desire to consolidate power against the fear that its preparations will push the military into activities that are more likely than not to decrease the country's security. In any equilibrium of this model, the government takes steps to prepare for consolidation of power in equilibrium unless the military is more likely to engage in unpromising activities if the government prepares to consolidate power than if it does not (the low type is more likely to act if the government prepares to consolidate power than if it does not).¹²

¹¹The security portion of the military's payoff is 1 (weighted by the emphasis that it places on security, γ_M) if its activity is successful in enhancing security, and -1 if the activity is unsuccessful. The military's expected security payoff is $\gamma_M \left[p(1) + (1-p)(-1) \right]$, where p is its probability of success. By assumption in the model, the "promising" activity has a positive expected value $(p_H > \frac{1}{2})$ and the "unpromising" activity has a negative expected value $(p_L < \frac{1}{2})$.

¹²Any costs of such preparations are trivial compared to the benefits of sole office holding, and the model assumes that they are costless for the sake of simplicity.

Theorem (The Reaction Equilibrium).¹³ The only pure-strategy equilibrium of the game is one with the following strategy profile: the government always prepares to consolidate power; the military always engages in promising military activity (in activity when it is of the high type), and the military engages in unpromising military activity (activity when it is of the low type) iff $\gamma_M \leq \frac{p_L(1-b)}{1-(1+b)p_L}$, where γ_M is the weight that the military places on utility from security, b is the share of domestic benefits initially enjoyed by the government (so 1-b is the share initially enjoyed by the military), and p_L is the probability that military activity with a low chance of success does succeed. After any signal $\sigma \in {\sigma_H, \sigma_L}$, the military believes that the government has prepared to consolidate with probability 1. The government (which moves first) believes at its decision node that the military is of the high type with probability μ (the probability with which Nature chooses the high type).

Discussion:

In any pure-strategy equilibrium of the game, the government's preparations cannot affect whether or not the military engages in unpromising activity, and so the government always prepares to consolidate power. To see why government preparations do not affect the military's choice, consider the logic of the military's beliefs. The military receives an incompletely informative signal about whether or not the government has prepared to consolidate power, and can condition its behavior on the signal it receives. However, in any pure-strategy equilibrium of the game, the government consistently takes one action (prepares to consolidate power, or does not), and thus the military knows that it has taken that action, regardless of the signal that it receives. 14 If the government's strategy is always to prepare to consolidate power, then the military believes with certainty after either signal that the government has prepared to consolidate power. If the government's strategy is never to prepare to consolidate power, then the military believes with certainty after either signal that the government has not prepared to consolidate power. If the military receives a signal contrary to the government's equilibrium strategy, it assumes that signal is an error, because it knows that there is some positive probability of an erroneous signal. Thus, the government cannot change the likelihood of unpromising military activity by not preparing to consolidate power.

While the government always prepares to consolidate power, the military may or may not choose to engage in activity in reaction to its preparations, if the activity available to it is unpromising. As the theorem states, whether or not it does so depends on the relationship between its level of professionalism (the weight that the military places on security, γ_M)

¹³The appendix provides in-depth sketches of proofs of all results in the paper.

¹⁴More formally, in any Perfect Bayesian Equilibrium, beliefs must be consistent with equilibrium strategies whenever possible.

to a function of the probability that unpromising activity is successful and of how much it stands to lose from being shut out of the power-sharing arrangement (1-b). If the military cares little enough about security, relative to the terms on the right-hand side, it chooses the unpromising activity. While the chance of success is relatively low (assumed less than $\frac{1}{2}$ for an unpromising activity), if the activity does succeed, the military prevents consolidation of power in addition to reaping security gains.

Despite the fact that the government's decision to prepare to consolidate power technically does not push the military into unpromising military activity, the government's preparations are the reason why the military takes such activity. The military would not engage in suboptimal military if the government had no option to consolidate power, or if it believed it unlikely that the government had taken preparatory steps to do so. In that sense, as long as the military has enough to lose from government consolidation of power and the unpromising activity has sufficient probability of success, a less-professionalized military reacts to the government's steps to consolidate power by taking unpromising risks with the nation's security.

The reaction equilibrium captures one key dynamic of the model, which is the military's motivation to take risks with the country's security to prevent government consolidation of power. The domestic-deterrence equilibria, considered next, capture both that dynamic and the government's hesitancy to provoke the military into unpromising activity. The theorems are presented for completeness; the discussion that follows explains the equilibria.

Theorem (Domestic-Deterrence Equilibrium I): The game has a mixed-strategy equilibrium in which: a) The government prepares to consolidate power with probability $\alpha^* = \frac{\pi_{HN}\gamma_M(1-2p_L)}{\pi_{HC}p_L(1-b)(1-\gamma_M)-(\pi_{HC}-\pi_{HN})\gamma_M(1-2p_L)}$, where $0 < \alpha^* < 1$; b) The military always engages in military activity when the available activity is promising (it is of the high type); c) The military engages in military activity when the available activity is unpromising (it is of the low type) with probability $\beta^* = \frac{(1-\gamma_G)(1-b)(1-\mu p_H)}{(1-\mu)[(\pi_{HC}-\pi_{HN})\gamma_G(1-2p_L)+p_L(1-\gamma_G)(1-b)]}$, where $0 < \beta^* < 1$, if and only if it observes a high signal. If the military observes a high signal after the government's choice, it believes that the government has prepared to consolidate with probability $P_{\sigma H}^* = \frac{\alpha^*\pi_{HC}}{\alpha^*\pi_{HC}+(1-\alpha^*)\pi_{HN}}$. If it observes a low signal after the government's choice, it believes that the government has prepared to consolidate with probability $P_{\sigma L}^* = \frac{\alpha^*(1-\pi_{HC})}{\alpha^*(1-\pi_{HC})+(1-\alpha^*)(1-\pi_{HN})}$.

¹⁵If the government were to refrain from the step (off the equilibrium path), military would refuse to believe that the government had irrationally exercised restraint, and would still engage in unpromising military activity if its level of professionalism were sufficiently low.

¹⁶While the reaction equilibrium exists for any values of the parameters, the deterrence equilibrium exists only when the equilibrium mixing probabilities, α^* and β^* , are between zero and one, which depends on a complex set of relationships. The Appendix shows a graph of the existence region for sample values of the exogenous parameters.

In these equations, γ_M (γ_G) is the weight that the military (government) places on utility from security, b is the share of domestic benefits initially enjoyed by the government (so 1-b is the share initially enjoyed by the military), and p_L (p_H) is the probability that military activity with a low (high) chance of success does succeed, μ is the probability with which Nature chooses the high type, and π_{HC} (π_{HN}) is the probability that the military observes a high signal if the government prepares to (does not prepare to) consolidate power. The government (which moves first) believes at its decision node that the military is of the high type with probability μ .

Theorem (Domestic-Deterrence Equilibrium II): The game has a mixed-strategy equilibrium in which: a) The government prepares to consolidate power with probability $\alpha^{**} = \frac{(1-\pi_{HN})\gamma_M(1-2p_L)}{(1-\pi_{HC})p_L(1-b)(1-\gamma_M)+(\pi_{HC}-\pi_{HN})\gamma_M(1-2p_L)}$ where $0 < \alpha^{**} < 1$; b) The military always engages in military activity when the available activity is promising (it is of the high type); c) The military engages in military activity when the available activity is unpromising (it is of the low type) always if it observes a high signal, and with probability $\beta^{**} = \beta^{**} = \frac{\mu(1-p_H)(1-\gamma_G)(1-b)-(1-\mu)[\pi_{HC}(1-(1-\gamma_G)(1-\rho_L(1-b)))+(\pi_{HC}-\pi_{HN})\gamma_G(1-2\rho_L)-1+(1-\gamma_G)b]}{(1-\mu)[(1-\pi_{HC})(1-(1-\gamma_G)(1-\rho_L(1-b)))-(\pi_{HC}-\pi_{HN})\gamma_G(1-2\rho_L)]}$, where $0 < \beta^{**} < 1$, if it observes a low signal.¹⁷ If the military observes a high signal after the government's choice, it believes that the government has prepared to consolidate with probability $P_{\sigma H}^{**} = \frac{\alpha^{**}\pi_{HC}}{\alpha^{**}\pi_{HC}+(1-\alpha^{**})\pi_{HN}}$. If it observes a low signal after the government's choice, it believes that the government has prepared to consolidate with probability $P_{\sigma L}^{**} = \frac{\alpha^{**}\pi_{HC}}{\alpha^{**}(1-\pi_{HC})+(1-\alpha^{**})(1-\pi_{HN})}$. In these equations, the parameters have the same meanings as in the previous Theorem. The government believes at its decision node that the military is of the high type with probability μ .

Discussion: Behavior in the domestic-deterrence equilibria is analogous to imperfect deterrence in the international arena, or, for example, to interactions between police and the policed. In both equilibria, the military engages in unpromising activity (when it is of the low type, so that is the available activity) more often when its information indicates that the government is more likely to have prepared to consolidate power than when it suggests the government is less likely to have done so; the difference is just enough to keep the government from always preparing to consolidate power.¹⁸ The government prepares to consolidate power just seldom enough to keep the military from always engaging in activity when its available activity is unpromising, after one or the other of the signals the military

¹⁷While the reaction equilibrium exists for any values of the parameters, the deterrence equilibrium exists only when the equilibrium mixing probabilities, α^* and β^* , are between zero and one, which depends on a complex set of relationships. The Appendix shows a graph of the existence region for sample values of the exogenous parameters.

¹⁸As explained earlier, the military always engages in activity when its available activity is promising.

might observe.

In both of these equilibria, the military engages in unpromising activity more often if it observes a high signal than if it observes a low one. Since the government's choice to consolidate power is more likely to lead to a high signal, the military is more likely to engage in unpromising activity if the government prepares to consolidate than if it does not. Thus, in these equilibria, the government's steps to consolidate power directly provoke the military into taking "extra" military activity that neither it nor the government favors for security reasons, activity that is more likely than not to detract from the country's international security.

The difference between the two domestic-deterrence equilibria lies in whether the military with an unpromising option pursues a mixed strategy when it observes a high signal or when it observes a low one. A high signal indicates that the government is more likely to have prepared to consolidate power, while a low one indicates that it is less likely to have done so. In the first domestic-deterrence equilibrium, the military that has an unpromising available activity and observes a high signal, it plays a mixed strategy, it engages in unpromising activity just often enough to keep the government indifferent between preparing to consolidate power and not doing so. When this type of military observes a low signal, it never engages in unpromising activity. In the second domestic-deterrence equilibrium, when this type of military observes a low signal, it plays a mixed strategy, and when it observes a high signal, it always engages in unpromising activity. While this second equilibrium is less intuitive, the difference between the military's pattern of behavior when the government does and does not prepare to consolidate power again keeps the government from always preparing to consolidate.

5 Implications

5.1 The Effect of the Domestic Power Balance on International Conflict

The argument suggests that domestic power-sharing increases the chances of international conflict: If the domestic portion of the military's payoff were removed, the military would have no incentive to engage in activity it assesses as "unpromising," but because it values domestic power, it may do so in any of the equilibria.¹⁹ Since the military always engages

¹⁹By assumption, the security portion of the military's payoff is negative if it takes unpromising activity; that is what it means for the activity to be unpromising. The security portion is zero if it refrains from activity.

in activity that it assesses as "promising," the overall activity level is higher in states with some degree of civil-military power sharing than in those without it. The activity that the military chooses in this model has international ramifications: by increasing international tensions, the military is able to convince the government of its importance, and dissuade it from consolidating power, but also increases the chances of conflict.

While most governments can, to some extent, consolidate power, and most militaries can, to some extent, engage in provocative military activity, the domestic balance of power between these two actors varies and affects the scope of each actor's abilities. The model does not formally represent this variation in the scope of each actor's options. However, the power struggle that the model depicts is more likely to provoke international conflict when government and military both have relatively far-ranging leeway to act. More-extreme government actions to consolidate power are more likely to provoke the military into taking unpromising actions, while more-extreme military activities are more likely to provoke international conflict. The analyses thus suggest that (all else equal) states with a relatively even domestic balance of power will become involved in more international conflict than in other states, though the state with power sharing need not always be the initiator.

Taking into account the prior literature, the implications of this argument become more complex. In states in which the government exerts firm control over the military, the power-sharing model may be less applicable, and the principal agent model more so (Feaver 2003). With greater governmental control, the government, whether civilian or military, has a greater ability to punish the military institution for failing to act according to government preferences, and the state's propensity to become involved in conflict will depend less upon government attempts to consolidate power (as it does in this model) and more upon the preferences of the government's leadership.

As discussed earlier, some but not all works in the prior literature argue that members of the military are more likely to prefer force as a means of resolving international disagreements, so that states with greater military power within the government will be more likely to use force. This paper shows that the military may take steps that exacerbate the risk of conflict even if military officers have no particular preference for the use of force, but is agnostic about whether or not they hold such a preference. If they do, the theory's implications about which types of regimes are more likely to become in conflict are complex. For example, it may be that states with military leaders have two reasons to become involved in conflict: these states may use force more often than states with civilian leaders because their

In the Reaction Equilibrium, the military engages in activity when it is of the low type (when its option is unpromising) only when its level of professionalism is below a threshold. In the Domestic-Deterrence equilibria, it does so with positive probability.

leaders favor the use of force as a means of resolving disagreements (Weeks 2014), especially when military leaders have strong control over the military as an institution. At the same time, when military leaders share power with the military as an institution they may become involved in additional conflict as the military attempts to influence the domestic power struggle.

Scholarship has discussed the conflict-proneness of states that are transitioning to democracy (e.g., Mansfield and Snyder (2002)). The argument in this paper is not about the conflict-proneness of "democratizing" states, since states with government-military power sharing need not be transitioning to democracy. However, states that fall at the extreme end of consolidated democracy rarely are states with a relatively even domestic balance of power; instead, they tend to be states with strong governmental (civilian) control. "Democratizing" states are more likely to have a more even balance of power between governmental and military leaders. The governmental-military dynamic that this paper identifies could be an additional reason why some of the transitional states experience conflict.

5.2 The Effect of Government Steps to Consolidate Power

The argument suggests an additional hypothesis about international conflict: since government steps to consolidate power, such as political purges of the military, can push the military into taking unpromising activity, states in which government and military leaders share power are more likely to become involved in international conflict after the government takes such steps. In the model, this phenomenon occurs in the Domestic Deterrence Equilibria, in which the military with an unpromising activity available to it chooses to engage in that activity more often when it observes a high signal, indicating that the government is more likely to have taken steps to consolidate power, than when it observes a low signal. A caveat is that the military's activities may not immediately start a conflict, as it does in the illustrative case study that follows, but more often may make conflict more likely by increasing international tensions.

The additional conflict comes from the military engaging in activities that are poor bets from a security standpoint, states with a relatively even domestic balance, particularly those in which the government is taking noticeable steps that seem likely to be aimed at consolidating power, are more likely to become involved in conflict that does not benefit the state's security. This result is broadly in keeping with the finding that "states whose militaries have a significant internal role or whose regimes engage in coup-proofing appear to have a substantially lower probability of winning interstate wars," and particularly with their finding that states with civilian purges of the military are less likely to win the wars they fight (Narang and Talmadge 2018, 1381,1396). Narang and Talmadge argue that government coup proofing and military involvement in government decrease military effectiveness; this paper's argument suggests that these factors may also lead the state into less-promising conflicts.

5.3 Military Professionalism and Government Consolidation of Power

While the goal of this work was to investigate the impact of government-military relations on conflict, the model also helps to explain the apparent prevalence of professionalized militaries in states with strong governmental control over the military. Military professionalism may make it easier for leaders to impose greater governmental control over the military. Military professionalism, defined for purposes of this work as the weight that the military places on the country's security versus on the benefits of domestic power, has two effects on the dynamics discussed here: It makes the government more likely to prepare to consolidate power, and it discourages the military from taking action that is more likely than not to harm the country's security, but which has a chance of convincing the government not to consolidate power. Since both of these effects make the government more likely to consolidate power, the institutional structures of government-military power sharing are unstable when the military is highly professionalized. Of course, outside the purview of this model, a government with substantial control also has an easier time imposing professionalism on its military.

Military professionalism affects the military's behavior in the Reaction equilibrium and the government's in the Deterrence equilibria. In the Reaction Equilibrium, the military engages in unpromising activity, when its level of professionalism is low enough, changing the government's mind about consolidation when the activity is nevertheless successful.²⁰ In the Domestic Deterrence Equilibria, the government prepares to consolidate just seldom enough to keep the military from always choosing the unpromising activity when that is the activity available. When the military is more professionalized, the unpromising activity is less appealing, so the government can prepare to consolidate more often. These separate dynamics add up to the same conclusions: the government is more likely to consolidate power when the military is more professionalized.²¹

²⁰If it acts, it forestalls consolidation if its activity is successful. Whether or not the unpromising activity is successful is unrelated to the weight that the military puts on the security portion of its payoff, which is its level of professionalization in the model.

²¹This paper argues that states with less professionalized militaries are more likely to engage in unpromising activities and to end up with poor outcomes. White (2017) [576] makes a related argument, that poor outcomes in crises lead militaries to give up some political power and to focus on defense, so that poor

Whether civilian consolidation of power is normatively a positive or a negative development depends on the resulting government. Leaders of states with civil-military power sharing can push the military out of power sharing to become democracies with stronger civilian control over the military. Alternatively, they can push the military out of power sharing to become autocrats (Svolik 2012, Chapter 4).

6 Illustration: The Kargil War

There are armies which guard their nation's borders, there are armies which are concerned with protecting their own position in society, and there are armies which defend a cause or an idea. The Pakistan Army does all three. –Cohen (1983)[1]

In the Spring of 1999, Pakistani Army personnel crossed the Line of Control (LOC), the cease-fire line between Pakistan and India, and established positions in the frozen Himalayan heights (Lavoy 2009b, 1).²² Taking advantage of the mountainous terrain, the wintry conditions, and other factors, the Pakistani Army took the Indian side by surprise, as it intended. However, as the Indian military commander at the time, V.P. Malik, has noted, "the ensuing Kargil war ended in a politico-military victory for India" (Malik 2006, 21).

This section of the paper briefly reviews the Kargil conflict to assess the impact of governmental-military relations on Pakistan's initiation of the conflict and to illustrate significant elements of the paper's argument.²³ In the model presented earlier, government attempts to consolidate power may lead the military to engage in activity that increases the chances of international conflict and is more likely than not to hinder the state's security. The military engages in this activity in the hope that it will turn out to be successful and persuade the government not to further consolidate power. This study argues that the Pakistani government had taken steps to consolidate power prior to the Kargil conflict. It also shows that the actions of military leaders had a direct effect on the country's entry into war,

outcomes are associated with professionalization of the military.

²²The Indians discovered the operation in May. The Cease Fire Line (CFL) was established through UN-brokered negotiations after India and Pakistan's first conflict in 1949. With minor changes, it became the Line of Control (LOC) after the 1972 Simla Agreement (Mazari (2003)[2], Kargil Review Committee (1999)[47]).

²³While this study references both Indian and Pakistani sources, it relies heavily on an edited volume by Peter L. Lavoy (at the time of the volume, U.S. Deputy Director of National Intelligence for Analysis). The volume is unusually even-handed for work on this topic, and because the "[t]he project editor and authors interviewed dozens of policymakers, intelligence officials, and military officers in Pakistan, India, and the United States," including former Pakistani President Pervez Musharraf and Indian General Ved Prakash Malik, who were their countries' Chiefs of Army Staff at the time of the conflict (Lavoy 2009a, xiii).

because military leaders either made the decision to send troops across the Line of Control unilaterally or heavily influenced by military leaders. Finally, it contends that sending forces into India was an unpromising activity and ultimately failed. The study does not present direct evidence of parochial motivations, and, consistent with the quote at the start of this section, it does not suggest that parochial interests were the only motivation behind the military action; rather, it suggests that the government's steps to consolidate power may have been one of the motivations for the military's decision.

6.1 Political-Military Background and Proximate Army Goals

What became the Kargil War is likely to have been intended as a minor, tactical operation by the Pakistani Army (Mazari (2003)[15], Lavoy (2009a)[20]). The immediate political-military purpose of the Kargil operation was to respond to what was perceived as Indian aggression along the Line of Control, perhaps forestalling further such aggression and in any case improving the tactical situation faced by the Pakistani military along the northern part of the line.

Several significant events immediately preceded or were ongoing at the time of Kargil. First, India and Pakistan tested nuclear weapons in 1998 (Kargil Review Committee 1999, 68). Second, as a result of the nuclear tests, Indian Prime Minister Atal Behari Vajpayee and Pakistani Prime Minister Nawaz Sharif began a high-level dialogue, culminating in Vajpayee's travel to Pakistan in February, 1999 at Sharif's invitation, where they signed the Lahore Declaration, agreeing to "intensity their efforts to resolve all issues, including the issue of Jammu and Kashmir" (Kargil Review Committee 1999, 68-9). Third, India faced an insurgency in Kashmir (Malik 2006, 28-33).²⁴ Finally, and perhaps most importantly. Pakistan and India had been involved in repeated skirmishes along the Line of Control including a 1984 military action in which India took over the Siachen Glacier area. When describing the lead-up to Kargil, Indian sources tend to cite Pakistani violations of the Line of Control (Singh 1999a, 120), and Pakistani sources to cite Indian ones (Mazari 2003, 24). Most likely, as Cheema (2009)[56] writes, "both parties sought to exploit vulnerabilities along the Line of Control." In the Siachen Glacier incident, India advanced into and took control of an area which India claimed was undemarcated by the LOC (Cloughley 1999, 289) and Pakistan claimed was on its side of the line (Mazari 2003, 3). The Glacier, while frozen and inhospitable, covers about 10,000 square kilometers.

The evidence suggests that Pakistan's Kargil operation had at least two immediate mil-

²⁴One goal of the operation seems to have been to take control over the highway that the India used to supply its military operations in Kashmir.

itary goals related to regaining the advantage along the LOC. First, the Pakistani army wanted to preempt offensive action by India along the northern part of the LOC. Lavoy recounts that Lieutenant General (retd.) Mahmud Ahmed, the officer who directed the cross-LoC occupation as Commander of the Pakistan army's 10 Corps told him that the army "picked up clues that India might be planning its own offensive military operation across the Line of Control in the summer of 1999, and when they realized how vulnerable their defensive lines were in the Northern Areas (which featured undefended gaps as wide as 10 and even 30 miles), they decided to take preemptive military action" (Lavoy (2009a)[26], Mazari (2003)[31]). Second, the army wanted to stop Indian shelling across the LOC in the Neelum Valley; the Indians were able to attack the valley from border posts they held in the heights on their side of the line. These two concerns were related; "Pakistani planners knew that their ability to retaliate for the Neelum Valley shelling was contingent upon holding key positions astride the Kargil-Dras highway. They ... pointed to numerous cases of Indian demonstrating that it was likely to take offensive action to secure its interests" (Cheema 2009, 57).

The Kargil plan hinged on an element of surprise; "Pakistani officials apparently calculated that due to difficulties imposed by terrain and weather, the positions once occupied would be extremely difficult to recapture. If they could be held until the following winter, when large-scale military operations would become impossible, these limited gains might become permanent" (Wirtz and Rana 2009, 217).

6.2 Governmental-Military Relations in Pakistan In the Lead-up to Kargil

After the death of Pakistani President Zia ul-Haq, head of Pakistan's military government, in an air crash in 1988, the Vice Chief "announced that the days of military dominance were over" (Cloughley 1999, 300). However, while the new government was a civilian one, the years between then and Kargil were ones of considerable civil-military strife.²⁵ At the time of the Kargil War, Nawaz Sharif, a civilian, was Prime Minister; however, he shared effective political power with the President and the army chief (Khan, Lavoy, and Clary 2009, 83).

In the lead-up to Kargil, Sharif took two kinds of measures to consolidate power. First, he replaced some top military leaders. Khan, Lavoy, and Clary (2009)[83] write that

In October of ..[1998], in an ostensible display of civilian authority over the military, Sharif precipitated the resignation of the Chief of Army Staff (COAS),

²⁵See Cloughley (1999) Chapter 12, pages 301-359.

General Jehangir Karamat, over the latter's suggestion to depersonalize governance and institutionalize national decisions in a body that would have a formal army role, the National Security Council (NSC). Karamat had been due to retire. The army viewed his sacking three months early as an unnecessarily punitive attempt to assert prime ministerial power and a deliberate move to undermine the confidence and strength of the armed forces.

As Karamat's replacement, Sharif installed General Pervez Musharraf. Musharraf, in turn, promoted and then appointed Lieutenant General Muhammed Aziz Khan into the vacant Chief of General Staff position, replaced the Rawalpindi corps commander with Lieutenant General Mahmud Ahmed (who directed the operation that began the Kargil War), and approved the appointment of Lieutenant General Ziauddin as Director General of the powerful Inter-Services Intelligence Directorate (ISID) (Khan, Lavoy, and Clary 2009). Thus, in a step towards consolidating power, the Prime Minister pushed him the Chief of Army Staff into early retirement and made several other important personnel changes.²⁶

In addition to changing top personnel, Sharif also encouraged senior military leaders to compete with each other. He set up Ziauddin as Musharraf's "rival," which apparently is how Musharraf saw him (Sharma 1999, 43). Ziauddin socialized with Sharif before and after his promotion to ISID Director, and his direct access to the Prime Minister appears to have created tensions between him and Army Chief Musharraf.²⁷ While Sharif appointed Musharraf as COAS, "[b]y March 1999, a noticeable coldness had crept into the relationship" (Sharma 1999, 41). Sharma (1999) [42] reports that Musharraf, who Sharif put in charge of the Water and Power Development Authority, used his position to embarrass Musharraf and his administration; "stories appeared in the Pakistani media that Sharif's family itself topped the list of defaulters".²⁸

In sum, government-military relations in Pakistan were strained at the time of Kargil. Directly before the military sent troops across the Line of Control into India, Karamat,

²⁶Cloughley (1999) [341-343] describes the power struggle between Sharif and his military somewhat differently. He cites a letter from Karamat denying that Sharif forced him to resign. However, he also notes that when Sharif appointed Musharraf to succeed Karamat, he passed over another general, Khattak, who was "considered the obvious choice to follow Karamat." This passing-over may have indicated to the military that Sharif intended to consolidate power.

²⁷Khan, Lavoy, and Clary (2009)[84, fn. 66] write that Musharraf's predecessor as Army Chief, Karamat, also objected to Ziauddin's socializing with Prime Minister Sharif (prior to Ziauddin's appointment as ISID Director), and report another incident, though after Kargil, in which Musharraf fired a Corps Commander after finding him meeting with the Prime Minister and other civilian leaders without clearance.

²⁸While Sharma's book sometimes seems less than fully objective (he uses words like "damning" to describe evidence of the Pakistani Army's involvement in Kargil), his reports about the tenor of the relationships between Musharraf, Ziauddin, and Sharif are in keeping with those in Khan, Lavoy, and Clary (2009).

then head of the Pakistani army, suggested a reorganization of government that would give the army more power. Prime Minister Sharif had recently replaced the top leadership of both army and intelligence (and had made other personnel changes), and had encouraged a rivalry between the two. The army was trying to maintain its power in the relationship, and "[u]nder these circumstances, Musharraf was presented with a risky plan to regain the initiative in Kashmir and demonstrate that Pakistan's new military leadership was capable of taking decisive action" (Khan, Lavoy, and Clary 2009, 85).

6.3 Who Knew About and Authorized Plans for Conflict?

Deposed prime minister Nawaz Sharif's allies and apologists have been spreading the word, since the climbdown from Kargil ordered by the prime minister in early July, that Sharif was out of the loop; Kargil was the army's show, and Sharif, the "statesman" who signed the Lahore Declaration with Indian prime minister Atal Behari Vajpayee in February, only endorsed the operation when it was too far advanced for him to call it off. – Popham (1999)

The plan for Kargil was coordinated by a very small group of high-ranking army officials (Khan, Lavoy, and Clary 2009, 85).²⁹ Qadir (2002)[25] writes that sometime around mid-November, Lt. Gen. Mahmud, Commander of Pakistan's 10 Corps, and a few other high-ranking officers met with Musharraf, and "sought permission to execute a plan, which had previously been shelved, to occupy terrain in the Dras-Kargil sector, vacated by the Indians every winter."³⁰

Whether or not Prime Minister Sharif authorized the Kargil incursion remains disputed. As the quotation at the start of this section illustrates, Sharif and his allies maintained that Kargil was an unauthorized action by the military. At the time of his trial, after Musharraf's takeover in a coup, Sharif said, "This ill-claimed and ill-conceived operation was kept so secret that the Prime Minister, some Corps Commanders and the Chief of Navy and the Air Force were kept in the dark" (Sharif, as quoted in Jones (2009)[120]). This claim, whether true or not, was politically expedient, since Pakistan initiated the conflict in the midst of a peace process and backed down in the face of Indian escalation and pressure from the U.S.

²⁹The planning was initially conducted by four senior officers: Lt. Gen. Javed Hassan (FCNA), Lt. Gen. Mahmud Ahmed, Commander 10 Corps; lt. Gen. Muhammed Aziz Khan, Chief of General Staff, and Chief of Army Staff Gen. Pervez Musharraf. (Wirtz 218)

³⁰Mahmud directed the operation. (Khan, Lavoy, and Clary 2009, 85) also argue that the plan could not have been presented to Musharraf before late November or mid-December.

Did Sharif authorize the Kargil operation, or at least did he know about it ahead of time? Qadir (2002)[26] argues that the subject was "casually broached" with Sharif in mid-December. In addition, both Mazari (2003)[57-8] and Khan, Lavoy, and Clary (2009)[85] recount President Sharif's visits to and briefings in Skardu and Kel in the Northern Areas in January and February of 1999 as evidence that he was briefed about Kargil before the operation began.³¹ In particular, (Khan, Lavoy, and Clary 2009, 85) cite Lieutenant General Mahmud as saying that he personally briefed Sharif; "He explained the vulnerabilities and what he suspected the Indians were planning. Sharif replied with a characteristic economy of words, simply telling Mahmud to 'fix it.'"

On the other hand, Jones (2009) [120] discusses tapes released by the Indians during the Kargil campaign that seem to confirm Sharif's version of events. In a taped conversation of May 26, Sharif states that he was told about Kargil "seven days back" and another participant tells Army Chief Musharraf that the operation succeeded because of its "total secrecy." Jones states that no one has disputed the authenticity of the tapes, and that some Indian ministers apparently concluded on its basis that Sharif had not been briefed in advance.

Moreover, by Jones' account, the army claims that Sharif formally approved the plan at a meeting at ISID headquarters in the second week of March. He writes that, "[t]wo eyewitnesses at this meeting have claimed that even at this stage (when the military intervention was already well under way) there was no mention of troops crossing the line of control" (Jones 2009, 122). According to this version of events, the military presented the operation to Sharif as an insurgent rather a military one and did not discuss Kargil as a military objective.³²

Overall, then, the evidence suggests that the military planned the Kargil operation independently. It seems likely, though not certain, that if the military leadership presented it to Sharif ahead of the operation, it omitted important information, and that if Sharif authorized it, it was in a fairly vague fashion.³³

³¹Mazari (57) also refers to briefings by the ISI on March 12, 1999, and by the Military Operations Directorate at GHQ on May 17, 1999, June 2, 1999, and June 22, 1999.

³²See Jones (2009)[120-23] for a full discussion; also see Qadir (2002)[26]. It also is possible that the military planned Kargil as a limited operation, and expanded when expansion seemed possible (Khan, Lavoy, and Clary 2009, 82).

³³See also Brooks (2008)[205] on this point.

6.4 Pakistan, the weaker party, failed to attain its goals.

Kargil was a case of asymmetric conflict;, "Pakistan, faced with India's conventional military superiority, endeavored to change the strategic picture through the use of limited military measures confined in a relatively small and remote portion of the contested region" (Gill 2009, 93).³⁴ The Correlates of War Composite Index of National Capability indicates that India had just over five times the military capabilities of Pakistan when the Pakistani military began the conflict in 1999.³⁵ However, both states tested nuclear weapons in 1998, and there is some evidence that Pakistan prepared missiles for possible deployment (Hoyt 2009, 158-9). The war began to turn in India's favor in late June and early July, before President Sharif signed a joint statement with U.S. President Clinton stating that Pakistan was pulling back (Gill 2009, 23). As the Indian military commander at the time, V.P. Malik, has noted, "the ensuing Kargil war ended in a politico-military victory for India" (Malik 2006, 21).

6.5 Discussion

The Kargil War case illustrates key elements of this paper's argument. The historical record suggests that a power struggle between governmental and military leaders was a factor in one country's decision to begin militarized action against another. The timing of the military's decision, and the extent to which the military kept it secret even from the Prime Minister, suggest that the military acted, in part, in an effort to maintain its domestic power as the government attempted to reduce it. Moreover, the military took action fairly independently, playing a decisive role in its country's entry into international armed conflict. The military prepared the plan, and, while it is unclear as to whether Sharif was completely unaware of it, as he claimed, the evidence suggests that he was probably neither completely aware nor fully informed. The plan reasonably could be described as "unpromising"; it had previously been rejected as too risky and ultimately failed. In sum, Kargil is a case in which government steps to consolidate power may have contributed to the military's decision to engage in activities that were unpromising from a security perspective, and which led the country into international conflict. If the operation had been successful, military leaders believed that they might restore the military's prestige; instead, it was unsuccessful.

Shortly after the Kargil conflict, General Musharraf came to power in a coup. As this paper discussed earlier, coups are another option available to the military when it believes

³⁴Pakistani author Shareen Mazari denies that Kargil was an asymmetric conflict because she maintains that it was not a "planned strategic military conflict" (Mazari, page 20). By "asymmetric conflict," the text here means only that Pakistan was militarily weaker.

³⁵The author accessed the data using the EUGene data management program (Bennett and Stam 2000).

that the government is trying to consolidate power; however, they are extremely risky for the plotters. While the theory presented here does not treat coups, one possibility is that militaries sometimes will turn to coups when other, less-risky possibilities for remediating the situation fail.

7 Conclusion

This paper joins a body of scholarship that investigates the impact of domestic institutions on international conflict. Drawing on ideas from the literature on civil-military relations and from comparative politics, it studies a type of institution that has been neglected, the structure of the relationship between the government and the military, showing that this relationship can affect a state's propensity to engage in activities likely to draw it into international conflict. In doing so, it also joins a small but growing literature that acknowledges that not just a top leader but multiple actors within a state have the ability to take actions that directly influence the state's propensity to become involved in international conflict.

The paper has important implications for our study of international conflict. The literature on civil-military relations has debated whether military leaders are more or less inclined to the use of force than their civilian counterparts. The model in this paper assumes that they are neither. Despite this assumption, military leaders deliberately engage in activities that increase the chance of conflict, even when the activity is more likely than not to be unsuccessful, decreasing their state's security. They do so in order to prevent the government from consolidating power and taking away their share of the benefits of office.

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Parameter	Meaning	
b	share of domestic power initially held by gov't.	
$p_{H/L}$	probability military activity is successful, high type/low type	
γ_i	weight that player i puts on security	
$\mid \mu \mid$	probability that Nature gives the military a high type	
$\pi_{HC/HN}$	probability that the military observes a high signal if	
	the government prepares to consolidate/does not	

Table 2: Parameters of the Model

Appendix

The Appendix characterizes the equilibria of the model presented in the text, beginning on page 3. The analyses here are detailed sketches rather than complete proofs. The game includes uncertainty, and so the equilibria characterized here are Perfect Bayesian Equilibria (PBE); an equilibrium consists of both a strategy profile in which strategies are rational given the equilibrium beliefs, and a set of equilibrium beliefs that are rational given the information structure of the game and the equilibrium strategies. The appendix begins with the pure-strategy equilibrium and then characterizes the mixed-strategy one. When the appendix refers to any equilibrium, it means any Perfect Bayesian Equilibrium.

For convenience, Table 2 summarizes the exogenous parameters of the model. By assumption, $0 < b, \gamma_i, \mu, \pi_{HC/HN} < 1; 0 < p_L < \frac{1}{2}; \frac{1}{2} < p_H < 1$. The paper refers to the type of military with $\rho = p_L$ as the "low type" and the type with $\rho = p_L$ as the "high type." The government is assumed to consolidate power if it has taken the preparatory step and the military has not taken action, or the military has taken action that was unsuccessful. It cannot consolidate power if it has not prepared to do so.

A Pure-Strategy Equilibrium: The Reaction Equilibrium

Remark. The high type of military has a dominant strategy of taking action, regardless of its beliefs about whether or not the government has prepared to consolidate power. Because the probability that its activity is successful is greater than $\frac{1}{2}$, the expected value of the security component $\gamma_M [p_H(1) + (1 - p_H)(-1)]$ of its payoff is positive if it engages in the activity; this component is zero if the military does not act. At the same time, the domestic-power component of its payoff is never lower if it acts than if it does not, and it is higher if the military acts successfully. That is, if the government does not prepare to consolidate,

the domestic portion of this type of military's payoff is the same $(\gamma_M(1-b))$ whether or not it chooses to act. If the government does prepare to consolidate, the domestic portion of its utility is strictly positive if it does act $(\gamma_M \rho_H(1-b))$, and 0 if it does not. Thus, in any equilibrium of this game, the high type of military takes action.

Remark: In any equilibrium in which the decision made by the low type of military does not depend on the signal it receives, the government always prepares to consolidate. This follows from the fact that the domestic portion of the government's expected payoff is higher and the security portion is the same if it prepares to consolidate than if it does not. The domestic portion is higher because if and only if it prepares to consolidate power, it later can do so if the low type of military does not act or takes an action that is unsuccessful; if the low type of military does act, the probability that it is unsuccessful is greater than $\frac{1}{2}$ by assumption.

Remark: In any pure-strategy equilibrium, the low type of military's strategy cannot depend on the signal that it receives from Nature about the Government's choice because its belief about the Government's action must be consistent with the Government's equilibrium strategy.

The work that follows characterizes an equilibrium in which the government always prepares to consolidate. The text refers to this equilibrium as the "Reaction Equilibrium" because the low type of military reacts to the government's preparations, either by engaging in its activity if it is less professionalized, or by refraining from doing so if it is more professionalized, as this appendix now details.

Assume that the Government prepares to consolidate with probability 1 in equilibrium. Then, after any signal $\sigma \in \{\sigma_H, \sigma_L\}$, by Bayes' Rule the military believes that the probability that the Government prepared to consolidate is 1. The low type of military has a p_L probability of success if it engages in the activity; if the activity succeeds its security payoff is 1 and it receives the domestic-status-quo payoff, (1-b). If the activity fails, its security payoff is -1 and its domestic payoff is 0, since the government consolidates power. It weights the security payoff γ_M and the domestic payoff $(1-\gamma_M)$. Thus, after any signal, the low type of military expects a payoff of

$$p_L (\gamma_M(1) + (1 - \gamma_M)(1 - b)) + (1 - p_L) \gamma_M(-1 + 0)$$

if it engages in the activity. If it does not engage in the activity, it has a payoff of 0, because the country has no change in security, and the government consolidates power, removing the military's share of domestic control. Thus, the low type of prefers to act iff

$$p_L(\gamma_M + (1 - \gamma_M)(1 - b)) + (1 - p_L)(-\gamma_M) \ge 0$$

or iff

$$\gamma_M \le \frac{p_L(1-b)}{1-(1+b)p_L}$$

Let $T^* \equiv \frac{p_L(1-b)}{1-(1+b)p_L}$. When $\gamma_M \leq T^*$, the low type of military prefers to engage in the activity and when $\gamma_M \geq T^*$ it prefers not to do so.

Thus, an equilibrium exists in which the government always prepares to consolidate. The military believes that the government prepared to consolidate with probability one after either signal. The high type of military always chooses to engage in its available activity. The low type of military chooses to engage in its available activity iff $\gamma_M \leq T^*$.

An equilibrium in which the government never prepares to consolidate does not exist.

The government always prepares to consolidate with positive probability in equilibrium. Assume the contrary: the government never prepares to consolidate in an equilibrium of the game. In that case, the military believes after either signal that the Government has not prepared to consolidate with probability 1. Thus, the low type of military expects a payoff of

$$p_L(\gamma_M + (1 - \gamma_M)(1 - b)) + (1 - p_L)(\gamma_M(-1) + (1 - \gamma_M)(1 - b))$$

if it acts and $\gamma_M(0)+(1-\gamma_M)(1-b)$ if it does not. It prefers to act iff

$$p_L(\gamma_M + (1 - \gamma_M)(1 - b)) + (1 - p_L)(-\gamma_M + (1 - \gamma_M)(1 - b)) \ge (1 - \gamma_M)(1 - b)$$

Since the government never prepares to consolidate, the military's domestic payoff is the same regardless of whether or not it acts: $((1 - \gamma_M)(1 - b))$. However, its security payoff is

$$p_L \gamma_M + (1 - p_L) \left(-\gamma_M \right)$$

if it acts and 0 if it does not. Since $p_L < \frac{1}{2}$, the security portion of its payoff is negative and it strictly prefers not to act.

Since the low type of military's action does not depend on the signal it receives, the government always prefers to prepare to consolidate in equilibrium. Contradiction.

A.1 Mixed-Strategy Equilibria: The Domestic-Deterrence Equilibria

This section characterizes two related Perfect Bayesian Equilibria (PBE) in which the government and the low type of military play completely mixed strategies. The text refers to these equilibria as "Domestic-Deterrence Equilibria" because the low type of military deters the government from always preparing to consolidate power. As remarked earlier, the high type of military has a dominant strategy, which is to engage in the available activity. In the equilibria, it plays this strategy; the low type of military acts with probability β (either β^* or β^{**}) that keeps the government indifferent between taking the initial step to facilitate consolidation of power and not; the government takes this step towards consolidation of power with probability α (α^* or α^{**}) that keeps the low type of military indifferent between engaging in its available military activity and not. Substantively, these equilibria represent situations in which the government consolidates power just seldom often enough to keep the military from always taking action when military action is a poor idea, and the military takes action when doing so is a poor idea just often enough to keep the government from always consolidating power. The two mixing equilibria differ in whether the low type of military is indifferent between its strategies after observing a high signal or after observing a low signal. In the former case, the low type of military never acts after observing a low signal. In the latter case, it always acts after observing a high signal.

Because the analyses are related, this section first characterizes the government's mixing probability in both mixed-strategy equilibria, then the low type of military's in both equilibria.

A.1.1 The Government's Mixing Probability

As is usual in characterizing PBE, the analyses begin at the last decision node of the game, at which the military chooses whether or not to take action, having already observed Nature's signal about whether or not the government prepared to consolidate power. (The actual last move of the game is Nature's if the military took action. Nature moves, deciding whether or not any action by the military was successful, which it is with probability p_k , where $k \in \{H, L\}$ and depends on the military's type.)

In any equilibrium in which the government mixes between its strategies, it must do so to make the low type of military indifferent between its strategies, either after observing a high signal or after observing a low signal.³⁶

³⁶An equilibrium in which the government mixes but the military does not is possible for a point value of

Beliefs: In any PBE, beliefs are updated by Bayes' Rule whenever possible. When the military makes its decision, it has received one of two possible pieces of information:

a) It received a high signal. This occurs with probability π_{HC} if the government takes a step to consolidate and with probability π_{HN} if it does not. If so, by Bayes' Rule, the probability with which the government took the step to consolidate is:

$$Pr[consol|\sigma = H] = \frac{\alpha \pi_{HC}}{\alpha \pi_{HC} + (1 - \alpha)\pi_{HN}} \equiv P_{\sigma H}$$

b) It received a low signal. This occurs with probability $\pi_{LC} = 1 - \pi_{HC}$ if the government takes a step to consolidate and with probability $\pi_{LN} = 1 - \pi_{HN}$ if it does not. If so, by Bayes' Rule, the probability with which the government took the step to consolidate is:

$$Pr[consol|\sigma = L] = \frac{\alpha (1 - \pi_{HC})}{\alpha (1 - \pi_{HC}) + (1 - \alpha) (1 - \pi_{HN})} \equiv P_{\sigma L}$$

Equilibrium beliefs: In a PBE, beliefs must be consistent with strategies and must be updates by Bayes' Rule whenever possible. In the mixed-strategy equilibria, the government prepares to consolidate power with probability α^* (first mixed-strategy equilibrium) or α^{**} (second mixed-strategy equilibrium). The military's beliefs at its decision node are therefore

$$Pr[consol|\sigma = \sigma_H] = \frac{\alpha^* \pi_{HC}}{\alpha^* \pi_{HC} + (1 - \alpha^*) \pi_{HN}} \equiv P_{\sigma H}^*$$

if the military receives a high signal and

$$Pr[consol|\sigma = \sigma_L] = \frac{\alpha^* (1 - \pi_{HC})}{\alpha^* (1 - \pi_{HC}) + (1 - \alpha^*) (1 - \pi_{HN})} \equiv P_{\sigma L}^*$$

if the military receives a low signal in the first equilibrium with fully mixed strategies, where α^* is the equilibrium probability with which the government prepares to consolidate power, calculated in the work that follows.

The analogous beliefs are

$$Pr[consol|\sigma = \sigma_H] = \frac{\alpha^{**}\pi_{HC}}{\alpha^{**}\pi_{HC} + (1 - \alpha^{**})\pi_{HN}} \equiv P_{\sigma H}^{**}$$

if the military receives a high signal and

$$Pr[consol|\sigma = \sigma_L] = \frac{\alpha^{**} (1 - \pi_{HC})}{\alpha^{**} (1 - \pi_{HC}) + (1 - \alpha^{**}) (1 - \pi_{HN})} \equiv P_{\sigma L}^{**}$$

 μ , the probability that the military is of the high type. This appendix does not characterize it.

if the military receives a low signal in the second equilibrium with fully mixed strategies, where α^{**} is the equilibrium probability with which the government prepares to consolidate power.

At the government's decision node, it believes that the military is of the high type with probability μ . The military does not act before the government, so the government's belief about the military's type must match the probability with which Nature assigns the military the high type at the start of the game.

Remark: $P_{\sigma H} > P_{\sigma L}$ follows algebraically from $\pi_{HC} > \pi_{HN}$. That is, because the signal is assumed to be somewhat informative, Bayes' Rules specifies that the military believes it more likely that the government took the step to consolidate if it observes a high signal than if it observes a low signal.

Actions: I. Government's Probability of Preparing to Consolidate that Leads the Low Type of Military to Mix after a High Signal.

We find the government's mixing probability α^* that makes the low type of military indifferent between its possible actions if it receives a high signal from Nature, then show that when the low type of military is indifferent between its actions after observing a high signal, it prefers not to act after observing a low signal.

In equilibrium, the military's action must be rational given its beliefs. In any equilibrium in which the low type of military plays both of its strategies with strictly positive probability following a high signal, it must be indifferent between its choices when beliefs are $P_{\sigma H}^*$, where $\alpha = \alpha^*$ is the probability with which the government prepares to consolidate in equilibrium. Thus, $P_{\sigma H}^*$ can be used to find α^* .

If the military does not engage in its available activity, it expects a payoff $(1-\gamma_M)(1-b)$ if the government did not not prepare to consolidate power, and 0 if it did. If the low type of military does engage in the activity, its expected utility is $p_L \left[\gamma_M + (1-\gamma_M)(1-b) \right] + (1-p_L) \left[-\gamma_M + (1-\gamma_M)(1-b) \right]$ if the government did not prepare to consolidate power and $p_L \left[\gamma_M + (1-\gamma_M)(1-b) \right] + (1-p_L) \left(-\gamma_M \right)$ if it did.

Then, when the low type of military has seen a high signal: if it does not take action, its expected utility is

$$[U_{\tilde{A}}|\sigma = \sigma_H] = 0 + (1 - P_{\sigma H})(1 - \gamma_M)(1 - b) \tag{1}$$

and if it does take action, its expected utility is

$$[U_A|\sigma = \sigma_H] = P_{\sigma H} \left[p_L \left[\gamma_M + (1 - \gamma_M)(1 - b) \right] + (1 - p_L) \left(-\gamma_M \right) \right]$$
$$+ (1 - P_{\sigma H}) \left[p_L \left[\gamma_M + (1 - \gamma_M)(1 - b) \right] + (1 - p_L) \left[-\gamma_M + (1 - \gamma_M)(1 - b) \right] \right]$$

which simplifies to

$$[U_A|\sigma = \sigma_H] = P_{\sigma H} \left[p_L \left[\gamma_M + (1 - \gamma_M)(1 - b) \right] + (1 - p_L)(-\gamma_M) \right]$$

$$+ (1 - P_{\sigma H}) \left[p_L \gamma_M + (1 - p_L)(-\gamma_M) + (1 - \gamma_M)(1 - b) \right]$$
(2)

After observing a high signal, the low type of military prefers to act when $[U_A|\pi=\pi_H] \ge [U_{\tilde{A}}|\pi=\pi_H]$ and is indifferent between acting and not when $[U_A|\pi=\pi_H] = [U_{\tilde{A}}|\pi=\pi_H]$, which is when

$$P_{\sigma H}^* = \frac{\gamma_M (1 - 2p_L)}{p_L (1 - b) (1 - \gamma_M)}$$

As discussed earlier, Bayes' Rule requires that

$$P_{\sigma H}^* = \frac{\alpha^* \pi_{HC}}{\alpha^* \pi_{HC} + (1 - \alpha^*) \pi_{HN}}$$

Thus, the low type of military is indifferent between engaging in the activity and not when:

$$\frac{\alpha^* \pi_{HC}}{\alpha^* \pi_{HC} + (1 - \alpha^*) \pi_{HN}} = \frac{\gamma_M (1 - 2p_L)}{p_L (1 - b) (1 - \gamma_M)}$$

or when

$$\alpha^* = \frac{\pi_{HN}\gamma_M (1 - 2p_L)}{\pi_{HC}p_L (1 - b) (1 - \gamma_M) - (\pi_{HC} - \pi_{HN})\gamma_M (1 - 2p_L)}$$

When $\alpha < \alpha^*$, the low type of military strictly prefers not to act; when $\alpha > \alpha^*$, the low type of military strictly prefers to act, and when $\alpha = \alpha^*$, it is indifferent between its pure strategies and may pay each some of the time (mix).

Remark: The low type of military does not act following a low signal when the government mixes with probability α^* . The military's belief after a low signal is $P_{\sigma L}$, and its expected payoffs from acting and not are as in 2 and 1 but with $P_{\sigma H}$ replaced by $P_{\sigma L}$, reflecting the appropriate probability that the government took the step to consolidate. Since the military acts in the hope of preventing consolidation, when the low type of military is indifferent between acting and not given a belief $P_{\sigma H}$ about the probability that the government prepared to consolidate, it strictly prefers not to act when it believes the government is less likely to have prepared to consolidate (that is, given a lower belief $P_{\sigma L}$).

II. Government's Probability of Preparing to Consolidate that Leads the Low Type of Military to Mix After a Low Signal. We find the probability with which the government prepares to consolidate that makes the low type of military indifferent between

its strategies after it observes a low signal, then explain why, when the low type of military is indifferent between its strategies after observing a low signal, it strictly prefers to engage in its activity after observing a high signal.

$$[U_{\tilde{A}}|\sigma = \sigma_L] = 0 + (1 - P_{\sigma L})(1 - \gamma_M)(1 - b) \tag{3}$$

$$[U_A|\sigma = \sigma_L] = P_{\sigma L} [p_L [\gamma_M + (1 - \gamma_M)(1 - b)] + (1 - p_L) (-\gamma_M)]$$

$$+ (1 - P_{\sigma L}) [p_L \gamma_M + (1 - p_L) (-\gamma_M) + (1 - \gamma_M)(1 - b)]$$
(4)

The low type of military is indifferent between its strategies when

$$[U_{\tilde{A}}|\sigma=\sigma_L]=[U_A|\sigma=\sigma_L]$$

which is when

$$P_{\sigma L}^* = \frac{\gamma_M (1 - 2p_L)}{p_L (1 - b) (1 - \gamma_M)}$$

When the government mixes with probability α^{**} ,

$$Pr[consol|\sigma = \sigma_L] = \frac{\alpha^{**} (1 - \pi_{HC})}{\alpha^{**} (1 - \pi_{HC}) + (1 - \alpha^{**}) (1 - \pi_{HN})} \equiv P_{\sigma L}^*$$

So the low type is indifferent when

$$\frac{\alpha^{**} (1 - \pi_{HC})}{\alpha^{**} (1 - \pi_{HC}) + (1 - \alpha^{**}) (1 - \pi_{HN})} = \frac{\gamma_M (1 - 2p_L)}{p_L (1 - b) (1 - \gamma_M)}$$

Solving for α^{**} yields,

$$\alpha^{**} = \frac{(1 - \pi_{HN}) \gamma_M (1 - 2p_L)}{(1 - \pi_{HC}) p_L (1 - b) (1 - \gamma_M) + (\pi_{HC} - \pi_{HN}) \gamma_M (1 - 2p_L)}$$

Remark: The low type of military has expected utility of 4 if it acts and 3 if it does not act following a high signal, but in each expected utility with $P_{\sigma L}$ replaced with $P_{\sigma H}$. Since $P_{\sigma H} > P_{\sigma L}$, in any equilibrium in which the government chooses α^{**} such that the low type of military is indifferent between acting and not if it observes a low signal, that type of military strictly prefers to act if it observes a high signal. Substantively, since the low type of military acts in the hope of preventing consolidation, it is more motivated to act when it

believes the government is more likely to have prepared to consolidate.

A.1.2 The Military's Mixing Probability

We now calculate the probability β with which the low type of military engages in the activity after observing a high signal in the first mixing equilibrium (β^*) or after observing a low signal in the second mixing equilibrium (β^{**}). This probability makes the government indifferent between acting and not. For simplicity, this work finds the equilibrium values of β by calculating the difference in expected payoff for the government between if it prepares to consolidate and if it does not do so. This difference must be zero for the government to be indifferent between its strategies.

Remark: The domestic component of the government's payoff is always higher in expectation if it takes the step to consolidate power, regardless of the military's type. Successfully consolidating, which requires this initial step, gives it the entire the domestic pie, rather than a share b < 1. While the high type of military is likely to succeed, stopping the government's consolidation attempt, it does not always do so; with probability $(1 - p_k)$ it fails, and a government that has prepared to consolidate power is able to follow through. Since $p_k < 1$ for both types of military, the domestic component of the government's expected payoff is always higher if it acts.

Remark: If the government knew that the military were of the high type (it knew that military action was a good idea), the government would have a dominant strategy to take the step to consolidate power. Given that the high type of military always acts, the government's strategy affects its own payoff when the military is of this type only by affecting whether or not it can consolidate power if the military is unsuccessful, as just discussed.

Remark: Existence of an equilibrium in which the government mixes completely between its strategies requires parameter values such that the government prefers not to consolidate when the military is of the low type and acts. Since a mixing equilibrium requires the government to be indifferent between its strategies, and it always prefers to prepare to consolidate when the military is of the high type, it must prefer not to make those preparations when the military is of the low type.

Remark: Existence of an equilibrium in which the low type of military deters the government from always preparing to consolidate power requires that the low type of military engage in its activity more often after a high signal than after a low signal. This follows from the assumptions that a government decision to take the step to consolidate power is more likely to result in a high signal while a government decision not to take the step is more likely to result in a low signal, and the previous remark. In the first mixed-strategy equilibrium,

this condition is met because the low type of military never engages in its available activity if it observes a low signal and engages in it with positive probability if it observes a high signal. In the second mixed-strategy equilibrium, this condition is met because the low type of military always engages in its available activity if it observes a high signal and engages in it with probability less than one if it observes a low signal.

The government's expected payoff from preparing to consolidate minus its expected payoff from not doing so is

$$\mu \Delta E U_G|_{\theta_M = \theta_H} + (1 - \mu) \Delta E U_G|_{\theta = \theta_L} \tag{5}$$

where μ is the probability that the military will turn out to be of the low type, $\Delta EU_G|_{\theta_M=\theta_H}$ is the government's expected payoff from preparing to consolidate minus its expected payoff from not doing so if the military turns out to be of the low type, and $\Delta EU_G|_{\theta=\theta_L}$ is the analogous difference if the military turns out to be of the high type.

We calculate $\Delta EU_G|_{\theta_M=\theta_H}$: If the military is of the high type, it always acts in equilibrium. If it acts and is successful, the government's payoff is the same whether or not it prepared to consolidate. However, if the high type of military happens to have an unsuccessful operation (probability $1-p_H$), then the government can consolidate iff it acted. Thus, with probability μ , the government's payoff from preparing to consolidate minus its payoff from not doing so is

$$\Delta E U_G|_{\theta_M = \theta_H} = (1 - p_H) (1 - \gamma_G) (1 - b).$$

I. Low type of military's mixing probability after a high signal that makes the government indifferent between preparing to consolidate and not.

As remarked earlier, if the low type of military is indifferent between its strategies (mixes) following a high signal, it does not engage in its activity following a low signal. We find the probability β with which the low type of military engages in its activity after observing a high signal that makes the government indifferent between its pure strategies.

First calculate $\Delta EU_G|_{\theta=\theta_L}$: The probability that the low type of military acts if the government prepares to consolidate is the probability that the military sees a high signal under this circumstance, multiplied by the probability that the low type acts if it sees a high signal, so $\pi_{HC}\beta$. The probability that it acts if the government does not prepare to consolidate is the probability that it sees a high signal if the government does not act multiplied by the probability that it acts if it sees a high signal, so $\pi_{HN}\beta$.

Thus, the government's expected payoff if it prepares to consolidate and the military of

the low type is:

$$A \equiv \pi_{HC}\beta \left[p_L \left(\gamma_G + (1 - \gamma_G)b \right) + (1 - p_L) \left(-\gamma_G + (1 - \gamma_G) \right) \right] + (1 - \pi_{HC}\beta) \left(1 - \gamma_G \right).$$

If the government does not prepare to consolidate, it never can consolidate power by assumption. Its expected payoff nevertheless depends on the probability that the military acts in this circumstance, since this probability affects the country's expected security situation. Its expected payoff if it does not prepare to consolidate and the military is of the low type is

$$B \equiv \pi_{HN}\beta \left[p_L \left(\gamma_G + (1 - \gamma_G)b \right) + (1 - p_L) \left(-\gamma_G + (1 - \gamma_G)b \right) \right] + (1 - \pi_{HN}\beta)(1 - \gamma_G)b$$

For substantive clarity, it is helpful to consider the separate out the difference in payoff to the government when the military is of the low type from security and from domestic politics.

The security difference is

$$\beta(\pi_{HC}-\pi_{HN}) (\gamma_G) (2p_L-1)$$

Note that this is negative since $p_L < \frac{1}{2}$, indicating that if the military is of the low type, the government is worse off in terms of security if it prepares to consolidate than if it does not.

The domestic-politics difference is

$$\beta \pi_{HC} \left[(-p_L)(1 - \gamma_G)(1 - b) \right] + (1 - \gamma_G)(1 - b)$$

Putting the pieces together, the different in the government's payoff between taking the step to consolidate and not doing so is

$$(1 - \mu) \beta \left[(\pi_{HC} - \pi_{NC}) (\gamma_G) (2p_L - 1) - p_L (1 - \gamma_G) (1 - b) \right] + (1 - \mu) (1 - \gamma_G) (1 - b) + \mu (1 - p_H) (1 - \gamma_G) (1 - b)$$

The government prefers to take the step to consolidate when this quantity is positive, which is when

$$\beta \le \frac{(1 - \gamma_G)(1 - b)(1 - \mu p_H)}{(1 - \mu)\left[(\pi_{HC} - \pi_{HN})\gamma_G(1 - 2p_L) + p_L(1 - \gamma_G)(1 - b)\right]}$$

The first mixed-strategy equilibrium occurs when the government is indifferent between its strategies, so when

$$\beta^* = \frac{(1 - \gamma_G)(1 - b)(1 - \mu p_H)}{(1 - \mu)\left[(\pi_{HC} - \pi_{HN})\gamma_G(1 - 2p_L) + p_L(1 - \gamma_G)(1 - b)\right]}$$

II. Low type of military's mixing probability after a low signal that makes the government indifferent between preparing to consolidate and not. As remarked earlier, if the low type of military is indifferent between its strategies (mixes) following a low signal, it always engages in its activity following a low signal. We find the probability β with which the low type of military engages in its activity after observing a low signal that makes the government indifferent between its pure strategies.

The difference between the government's payoff from preparing to consolidate and its payoff from not doing so if the military is of the high type is the same as in the first mixed-strategy equilibrium, since the high type of military's strategy is identical

$$\Delta E U_G|_{\theta_M = \theta_H} = (1 - p_H) (1 - \gamma_G) (1 - b).$$

Next, calculate $\Delta EU_G|_{\theta=\theta_L}$: In the posited mixed-strategy equilibrium, the low type of military always acts if it sees a high signal. The military sees a high signal with probability π_{HC} if the government acts, and π_{HN} if the government does not act. The low type of military acts with probability β if it sees a low signal, which if the government acts happens with probability $(1 - \pi_{HC})$. The probability with which the low type of military acts if the government acts is thus $(\pi_{HC} + (1 - \pi_{HC})\beta)$ and otherwise it does not act. If the low type of military acts, with probability ρ_L it succeeds, and the government gets a positive security payoff and does not consolidate power, and otherwise it fails, and the government gets a negative security payoff and does consolidate power. If it does not act, the government gets the status-quo security payoff of 0 and consolidates power, obtaining a domestic-politics payoff of 1.

The government's expected utility of acting is thus

$$\left(\pi_{HC} + (1 - \pi_{HC})\beta\right) \left[\gamma_G(2\rho_L - 1) + (1 - \gamma_G)(1 - \rho_L) + \rho_L(1 - \gamma_G)b\right] + (1 - \pi_{HC})\left(1 - \beta\right)$$

If the government does not act, the military sees a high signal with probability π_{HN} and the low type always acts in this situation. It sees a low signal with probability $(1 - \pi_{HN})$ and the low type acts with probability β . Note that since the government did not act, it cannot consolidate power regardless of the military's action and of the success of any action,

so its domestic payoff is always $(1 - \gamma_G)b$. Its security payoff is 1 if the military acts and succeeds, -1 if it acts and fails, and 0 if it does not act, all weighted by the weight that the government places on security, γ_G . The government's expected utility of not acting is thus.

$$(\pi_{HN} + (1 - \pi_{HN})\beta) [\gamma_G (2\rho_L - 1)] + (1 - \gamma_G)b$$

The difference between the government's payoff from acting and its payoff from not acting when the military is of the low type is

$$(\pi_{HC} - \pi_{HN}) (1 - \beta) \gamma_G (2\rho_L - 1) + (\pi_{HC} + (1 - \pi_{HC})\beta) [(1 - \gamma_G)(1 - \rho_L) + \rho_L (1 - \gamma_G)b] + (1 - \pi_{HC}) (1 - \beta) - (1 - \gamma_G)b$$

Putting together the government's payoffs when the military is of the high and of the low type, the government prefers to act

The overall difference between the payoff from acting and its payoff from not acting is $\mu \Delta E U_G|_{\theta_M=\theta_H} + (1-\mu) \Delta E U_G|_{\theta_M=\theta_L}$

The government is indifferent between acting and not acting when this difference is zero, or when

$$\beta (1 - \mu) \left[(1 - \pi_{HC}) \left((1 - \gamma_G)(1 - \rho_L) + \rho_L (1 - \gamma_G)b \right) - (1 - \pi_{HC}) - (\pi_{HC} - \pi_{HN})\gamma_G (2\rho_L - 1) \right]$$

$$= -\mu (1 - p_H) (1 - \gamma_G) (1 - b)$$

$$- (1 - \mu) *$$

$$\left[\pi_{HC} \left[(1 - \gamma_G)(1 - \rho_L) + \rho_L (1 - \gamma_G)b \right] + (1 - \pi_{HC}) - (1 - \gamma_G)b + (\pi_{HC} - \pi_{HN})\gamma_G (2\rho_L - 1) \right]$$

With some algebra, the government is indifferent between its pure strategies when $\beta = \beta^{**}$, where

$$\beta^{**} = \frac{\mu (1 - p_H) (1 - \gamma_G) (1 - b)}{(1 - \mu) [(1 - \pi_{HC}) (1 - (1 - \gamma_G) (1 - \rho_L (1 - b))) - (\pi_{HC} - \pi_{HN}) \gamma_G (1 - 2\rho_L)]} - \frac{-(1 - \mu) [\pi_{HC} (1 - (1 - \gamma_G) (1 - \rho_L (1 - b))) + (\pi_{HC} - \pi_{HN}) \gamma_G (1 - 2\rho_L) - 1 + (1 - \gamma_G) b]}{(1 - \mu) [(1 - \pi_{HC}) (1 - (1 - \gamma_G) (1 - \rho_L (1 - b))) - (\pi_{HC} - \pi_{HN}) \gamma_G (1 - 2\rho_L)]}$$

A.1.3 Existence of the Domestic-Deterrence Equilibria

Each deterrence equilibrium exists only when the equilibrium mixing probabilities, α^* and β^* or α^{**} and β^{**} , are between zero and one, which depends on a complex set of relationships.

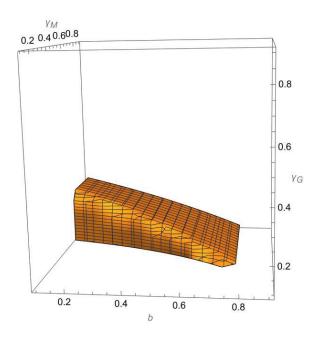


Figure 2:

Figures 2 and 3 show graphs of the existence region of the these equilibria for an illustrative case in which the probability that an unpromising military activity succeeds is 0.25; the probability that a promising one succeeds is 0.9; the probability of a high signal when the government took steps to consolidate is 0.9; the probability of a high signal when the government did not take such steps is 0.1, and the *ex ante* probability that the military has a promising activity available is 0.25. While the existence range is similar for these values of the parameters, the lower bound for the weight that the military puts on security is higher in the existence region for the second equilibrium. Together with the earlier work in this appendix, these graphs show that the equilibria exist for some values of the parameters.

A.1.4 Comparative Statics: The government consolidates more often when the military is more professionalized.

The text claims that the government is more likely to consolidate power when the military is more professionalized. In the model, a higher γ_M represents a more-professionalized military. Government consolidation of power in the model requires a) that the government take preparatory steps to do so; and b) that the military either refrain from activity, or that it engage in activity that is unsuccessful. In the Reaction Equilibrium (the pure-strategy equilibrium), the government always takes preparatory steps, and the military always engages in

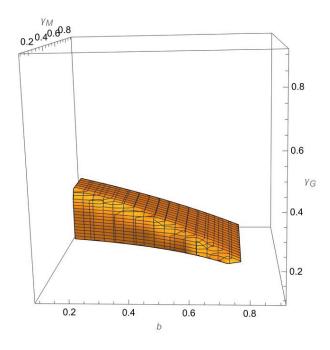


Figure 3:

activity when a promising activity is available. It engages in activity when an unpromising activity is available only when γ_M is less than a threshold, which means that it is sufficiently unprofessionalized. Since the unpromising activity succeeds with positive probability ρ_L , the military is more likely to forestall government consolidation of power when its level of professionalism is below the threshold ($\gamma_M < T^*$), so when it is less professionalized.

Comparative statics show that the government consolidates more often in the Domestic-Deterrence Equilibria when the military is more professionalized (γ_M is higher).

From earlier, the mixing probability in the first Domestic-Deterrence Equilibrium is:

$$\alpha^* = \frac{\pi_{HN}\gamma_M (1 - 2p_L)}{\pi_{HC}p_L (1 - b) (1 - \gamma_M) - (\pi_{HC} - \pi_{HN})\gamma_M (1 - 2p_L)}$$

$$\frac{\partial \alpha^*}{\partial \gamma_M} = \frac{\pi_{HN} \pi_{HC} p_L (1 - 2p_L) (1 - b)}{D^2}$$

where D is the denominator of α^* .

The sign is that of the numerator.

$$\pi_{HN}\pi_{HC}p_L(1-2p_L)(1-b) > 0$$

since
$$0 < p_L < \frac{1}{2}$$
 and $0 < \pi_{HN}, \pi_{HC}, b, \gamma_M < 1$.

Thus, when the military's weight on security goes up, the government consolidates more often. The intuition behind this result is that when the military's activity is likely to fail, the military is motivated to act only to prevent the government from consolidating power. When it cares less about preventing consolidation – and more about the military/security situation – the government can consolidate more often and keep the military indifferent between acting and not.

The mixing probability in the second Domestic-Deterrence Equilibrium is:

$$\alpha^{**} = \frac{(1 - \pi_{HN}) \gamma_M (1 - 2p_L)}{(1 - \pi_{HC}) p_L (1 - b) (1 - \gamma_M) + (\pi_{HC} - \pi_{HN}) \gamma_M (1 - 2p_L)}$$
$$\frac{\partial \alpha^{**}}{\partial \gamma_M} = \frac{(1 - \pi_{HN}) (1 - 2p_L) (1 - \pi_{HC}) p_L (1 - b)}{D^2}$$

where D is the denominator of α^{**} . Since $0 < \pi_{HN}, \pi_{HC}, b < 1$ and $0 < p_L < \frac{1}{2}, \frac{\partial \alpha^{**}}{\partial \gamma_M} > 0$. As in the first Domestic-Deterrence Equilibrium the government is more likely to take steps to consolidate power when the military puts a greater weight on security, or when it is more professionalized.