

# Coup-friendly Institutions and Apolitical Militaries: a Theory of Optimal Military Influence.

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## Abstract

Military coups often attract popular support. Certain constitutions even contain clauses that implicitly allow the military to intervene in domestic politics. Also, the punishments for leaders of failed coups tend to be mild. However, even in countries with coup-friendly institutions, military officers are typically not allowed to participate in political debates. Hence, the institutions that govern civil-military relations seem to simultaneously encourage and discourage military interventions in domestic politics. This paper offers a simple theoretical model that rationalises these seemingly paradoxical institutions. The process of staging a coup is modelled as a leader-follower game with two-sided asymmetric information between two groups within the military. Both of these groups care about the quality of government in a general interest dimension, but they may differ on a second, factional dimension (e.g. ethnic or ideological). Each group receives an imperfect signal of the other group's factional identity. In this set-up, optimal civil-military institutions should allow for coups that are aligned with the general interest, while discouraging those coups that are driven by factional interests only. The model shows that it is never optimal to allow open political communication in the military as this will trigger coups that are mainly driven by factional interests. At the same time, the model shows that limited punishments for failed coups can be optimal, but only if factionalisation is sufficiently strong. An extension of the baseline model allows for "extremist" ideologies. The analysis highlights how a combination of factionalisation and uncertainty about political views within the military can be an important driver of the gradual demilitarisation of politics.

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# 1 Introduction

Surprisingly, the civil-military institutions that historically governed civil military relations simultaneously encouraged and discouraged coups. In 1970, fourteen Latin American countries had constitutional clauses which allowed the military to intervene in politics (Stepan, 1971). Also, the punishments for the leaders of failed coups were (and are) often surprisingly low: the leader of the failed 2000 coup in Ecuador, Lucio Gutiérrez, was allowed to run in the presidential elections only three years later.<sup>1</sup> Low punishments and institutionalised legitimacy of coups seem to encourage political interventions of the military. These coup-friendly institutions could reflect the view that the armed forces have a role to play in controlling the executive power. At the same time, even in contexts in which political institutions are "coup friendly", officers are typically not allowed to openly engage in political debates. The latter institution clearly constrains the political role of the military. This paper will explore the optimal design of civil-military institutions, under the assumption that political elites or social planners deem some control of the military over the executive power desirable.

This paper presents a game-theoretical model that rationalises observed civil-military institutions such as the neutrality of the army and limited expected punishments for failed coup leaders. The process of staging a coup will be modelled as a leader-follower game between two different groups within the military. Both of these groups care about the quality of government in a general interest dimension, but they may differ on a second, factional dimension (e.g. ethnic or ideological). Each group receives an imperfect signal of the other group's factional identity. The leader decides to stage a coup attempt, but will only be successful if he is supported by the group of followers. Hence, the gains from staging a coup will include the possibility to oust a poorly performing government and the chance to promote a factional agenda. These gains will be weighed against the expected costs of staging a failed coup. By manipulating the expected costs associated with failed coup attempts, civil-military institutions will be able to shape the military's coup behaviour. The welfare measure employed in this paper will assume that coups against poorly performing governments should be encouraged, whereas coups targeting a well performing government should be discouraged. According to this welfare criterion, my model suggests that is never optimal to allow open political affiliations in the military. Open affiliations will tend to promote coups driven by factional interests. As a corollary, the military is expected to perform poorly if officers cannot hide their political affiliations (e.g. in case of ethnic cleavages). However, the optimal punishments for failed coup leaders vary. If the military is severely factionalised in different

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<sup>1</sup>Shifter (2004).

political groups, then it may be optimal to limit punishments for failed coups to encourage the military to play its role as arbitrator in domestic politics. However, if political or ideological cleavages in the military are limited, then high punishments for failed coup plotters are optimal. Further extensions of the baseline model will account for endogenous communication, and the possibility of military takeovers by an "extremist faction" (which is *not* preferred to a poorly performing incumbent). This last extension highlights how a combination of factionalisation and uncertainty about political views within the military can be an important driver of gradual demilitarisation of politics.

This paper contributes to a growing literature that models the influence of the military over policy making. In a closely related contribution, Besley and Kudamatsu (2007) focus on institutional design aimed at holding a government accountable for its general interest policy in a divided "society". Whereas these authors compare stylised autocracies with democracies, I focus specifically on the role of military interventions and on normative implications for civil-military institutions. Sharing my focus on military interventions, Besley and Robinson (2011) model the strategic interaction between a civilian government and the military. In their set-up, the size of the army and the decision to stage a coup are the key decision variables. A central idea that my paper shares with these authors is the fact that the military is *politicised*, i.e. that the military does not just promote its own corporate interests but is a mapping from society at large. A different model of military interventions is developed by Acemoglu, Ticchi and Vindigni (2009). These authors explore the moral hazard problem that arises when the elite empower the military to repress democratisation attempts: a stronger military may want to overthrow the elite. These authors assume that the military is always united and driven by corporate interests (e.g. military spending), which is very different from my assumption of a politicised and factionalised military. Leon (2009) focuses on career options for a representative officer (in the army or in a military government) and links coup behaviour to the frequency of wars.<sup>2</sup> These recent contributions point at the rich interactions between coups and specific policy decisions, but they mostly abstract from the mechanics of the coup process. This paper will analyse the internal coup process within the military in more detail, by introducing factionalisation and civil-military relations that shape the internal coup process. A contribution that shares my focus on the internal coup process is Sutter (2003). This author develops a model of coups focusing on the collective action problem within the military, which is different from the asymmetric information approach adopted in this paper. The

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<sup>2</sup>Several authors have conducted empirical research on coups, but focusing on different questions than mine. Such econometric analyses of coups can be found in Belkin and Schofer (2003), Collier and Hoeffler (2007), and Londregan and Poole (1990).

internal coup process is also the main focus of Geddes (2003), who models coups as a simultaneous coordination problem between different factions in the military. This author shares my focus on a factionalised military, but she does not explore the role of asymmetric information and civil-military institutions. In contrast, Crescenzi (1999) highlights the importance of asymmetric information in political transitions, although this author does not focus on military interventions in particular.<sup>3</sup> While the existing literature has offered a rich insights on the factors that could drive coup behaviour, including both internal characteristics of the army and structural economic factors, it is striking that few models incorporate the idea that the military is factionalised over political views. Nevertheless, a substantial body of literature criticises the idea that the military can be considered as a unitary actor.<sup>4</sup> This paper will place the politicised and factionalised nature of the armed forces at the heart of its analysis and explore the implications of this approach for the role and design of civil-military institutions.

The paper is organised as follows. First, I will discuss certain stylized facts about coup behaviour which the formal framework will incorporate. Second, I will informally describe the key assumptions, the mechanism and the main results of the theoretical model. In a third section, the formal model will be introduced and its results will be linked to relevant cases. The fourth section will present an extension of the baseline model that offers a microfoundation of earlier assumptions. The fifth section discusses two important extensions of the theoretical framework. The sixth section offers further interpretations. In a final section, I will offer concluding remarks.

## 2 Background

Most militaries do not allow officers to discuss politics and require officers to remain "neutral" (Finer, 1962, p34).<sup>5</sup> In several countries, this neutrality is underlined by constitutional clauses. For instance, the 1982 Turkish constitution does not only prevent military personnel from becoming elected deputies and being members of political parties, it also prohibits military personnel to vote at all.<sup>6</sup> This institutionalised neutrality makes it difficult for coup plotters to recognise supporters. Hence, it discourages

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<sup>3</sup>This author models the decision to revolt by a domestic opposition who faces authoritarian leaders of unknown types (hard-liner or soft-liner). Feaver (2003) models the agency problem that arises between a government and the military, but he does not focus on military interventions.

<sup>4</sup>See for example Stepan (1971, p7), Finer (1962, p34-42), Fitch (1998, p109-110), Geddes (2003), Loveman (1999, p207), and Philip (1974,p75-99 and 1985, p190).

<sup>5</sup>Huntington (1981) also argues that civilian control over the army relies on an autonomous and politically neutral army.

<sup>6</sup>Articles 67, 68 and 76 of the 1982 Turkish constitution.

coups. While neutrality is the norm, there are exceptions. Sometimes, political affiliation is difficult to hide, for instance if the main political tensions are along ethnic lines (Luttwak, 1968, p59). There is even one case in which political affiliations were deliberately open. In Brazil during the 1950ies and 1960ies, military club elections were fought over political issues and vote results were published in military journals (Stepan, 1971, p44).

Given that the neutrality of the military is common, it is surprising that a norm for the military to abstain from intervening in politics was not wide-spread until recently. In 1970, fourteen Latin American countries had constitutions that implicitly allowed the military to intervene in politics (Stepan, 1971, p79). For instance, the Brazilian constitution of 1946 stipulated the military to be "obedient" to the executive, but only "within the limits of the law". This clause was interpreted to give the military the *de jure* power to intervene in politics as soon as the government was considered to transgress "the limits of the law". In this sense, the armed forces took on the role of a "Supreme Court". Surprisingly, the clause was deliberately included in the Brazilian constitution by democratically elected politicians because they considered the military to be a good custodian of the state (Stepan, 1971, p79). These ideas may also explain the surprisingly low punishments for failed coup leaders in several cases. The leaders of the failed Brazilian coup of 1961 were the three generals who served as ministers of defence. They were never prosecuted for their role in the coup and this mild punishment was institutionalised, because their coup attempt could be considered a "ministerial decision".<sup>7</sup> Even if political institutions do not explicitly allow military control, military interventions often have a high degree of legitimacy. The *de facto* role of the military as a "supreme court" could stem from a situation in which political institutions are too weak to produce legitimate civilian arbitrators in political conflicts. In line with this idea, a number of very recent military interventions attracted strong popular support in Africa.<sup>8</sup> However, the role of the military in Latin America has clearly declined over the past decades. All Latin American countries have now adopted new constitutions that curtail the role of the military in politics (Einaudi, 1996).<sup>9</sup> Similarly, Turkey has recently adopted a package of constitutional amendments that increase executive control over the army.<sup>10</sup>

The main aim of this paper is to investigate how these institutional settings affect coup behaviour

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<sup>7</sup> Another example: Ramon Barquin, the Cuban colonel who staged a failed coup attempt against president Battista in 1956, was sentenced to a mere six years in jail. (Bonachea et al., 1974)

<sup>8</sup> In Madagascar the military installed president Rajoelina in 2009 in response to growing public discontent (Ploch, 2009). In Egypt's 2011 revolution, the army is thought to have been pivotal in ousting President Mubarak.

<sup>9</sup> In Peru, the 1993 constitution states explicitly that coups can never be legitimate: "Power emanates from the people. [...] No person, organization, Armed Force [...] may arrogate to themselves the exercise of such power. To do so constitutes rebellion or sedition." (Art.45)

<sup>10</sup> The Economist, "Erdogan wins again", 16 April 2010 (<http://www.economist.com/node/17046653>).

and which settings can be "optimal" for a social planner. This exercise will also point at the tensions that are inherent to the design of civil-military institutions. In the final sections, I will argue that these tensions can be understood within the formal framework of this paper. These tensions will be able to explain shifts away from legitimising military control over politics.

### 3 Theoretical framework

In this section, I will introduce the key assumptions, mechanism and results of the theoretical model. The model's set up will rely on three main assumptions.

First, I propose a model in which coups can be "desirable". I assume that an incumbent government has a default ideology (say, left wing). Moreover, government can be "low quality" or "high quality" in a general interest dimension.<sup>11</sup> The quality of government in the general interest dimension will be taken as the welfare measure, which is not sensitive to ideology in the baseline model. If a military government replaces the incumbent, I assume that it has a higher expected quality than a bad incumbent, but a lower expected quality than a good incumbent. Under these assumptions, a coup against a bad incumbent is "desirable" in the general interest dimension. It is not difficult to find examples of cases in which military coups attracted strong popular support because the military ousted unpopular leaders. For instance, the 1964 coup in Brazil was enthusiastically welcomed in the editorials of all major newspapers (Stepan, 1971, p110-12). In contrast, a coup against a well-performing incumbent is always "undesirable" according to this welfare measure.<sup>12</sup>

The explanation for why "undesirable" coups ever occur builds on the second assumption: the military consists of officers who care unanimously about the government's quality, but who are factionalised along ideological lines. Hence, officers either share the ideology of the incumbent (left-wing) or hold rivalling views (say, right-wing). The idea that the military does not just narrowly promote its corporate interests, but is factionalised along lines similar to those in society at large is supported by a substantial body of literature.<sup>13</sup> If coups are driven by factional interests, rather than the general

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<sup>11</sup>The idea underlying coup friendly constitutions is exactly that, sometimes, coups can be "desirable" in a general interest dimension. Following Besley and Kadumatsu (2007), "good" governments might be thought of as being characterised by low child mortality, high economic growth, high educational attainment and low corruption.

<sup>12</sup>In Nigeria, gen. Murtala Mohammed, who was widely acclaimed for his efforts to cut corruption, was killed in a coup in 1975. In this case, the interest of one particular faction within the military seemed to have driven the coup (Alli, 2000).

<sup>13</sup>Stepan (1971, p7) writes for instance: "Descriptions of ideal military institutions which may emphasise such features as military unity or national orientation often conceal more than they reveal about the interactions between the military and the political system". Authors who emphasise the role of factionalisation within the military include Finer (1962, p34-42), Fitch (1998, p109-110), Philip (1974,p75-99 and 1985, p190) and Loveman (1999, p207). Geddes (2003) argues that the main reason why military regimes are relatively unstable is because the armed forces are typically factionalised

interest, they are undesirable.<sup>14</sup> Once these rivalling political affiliations are introduced in the military, staging a successful coup becomes a *leader-follower* problem, possibly with *two-sided asymmetric information*. Successful coup leaders need the support of a critical mass within the military. However, if political affiliations are kept secret, the leader cannot be certain that a coup will be supported and the officers who are critical for a coup to succeed may be reluctant to lend their support to a coup leader, if they do not know his true ideology. They fear that, once in office, a coup leader is in an excellent position to promote policies in line with his ideology. The importance of this coordination problem may vary because of three main sources, which correspond to the key parameters of the model. First, the strength of factionalisation will affect the coordination problem. Second, the openness of political affiliation can vary. Finally, the coordination problem becomes less severe if the punishment for miscoordination, i.e. staging a failed coup, is low.

Third, I assume it is impossible to condition these punishments for failed coups on the quality of the incumbent government. There are three reasons for this assumption. First, if the incumbent government can decide on the punishments it may not be optimal to make punishments conditional on its quality.<sup>15</sup> Second, the quality of the incumbent government may be incontractible, for instance because it is observable to military officers, but not verifiable by a court.<sup>16</sup> Finally, the organisation that decides over punishments (e.g. the judiciary, a military tribunal or the executive power) may be factionalised itself. More generally, low punishments for failed coup plotters could be considered as a symptom of institutions that attach some legitimacy to military interventions.

Based on the three key assumptions, I try to answer the question which institutional set-up will sufficiently hold poorly performing governments accountable, while at the same time prevent coups that are driven by factional interests only. This model yields three key results:

First, high punishments and low political openness achieve first best control of the military over politics, which implies that a successful coup is staged if and only if the incumbent is poorly performing. This requires that ideology does not dominate the utility function of officers. In particular, all factions within the military must be willing to support a coup leader of unknown ideology against a bad incumbent. The coup experiences of Peru (1948-1968) and Brazil (1948-1964) are consistent with the positive results of this parameter range, although Brazil's culture of open political debate in the

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between opponents and proponents of military rule. The latter view corresponds to a specific interpretation of the framework developed in this paper.

<sup>14</sup>Finer (1962, p34-60) distinguishes between coups driven by "national interest" versus "sectional interests".

<sup>15</sup>A government might implement high punishments to remain in power, regardless of its quality. If government quality is not observable to the electorate, punishments can be a signal of government quality and a pooling equilibrium with low punishments may arise.

<sup>16</sup>This is a standard assumption in the incomplete contracts literature (Hart , 1993).

military is not consistent with the "institution design optimum". In contrast, if ideology becomes more important, it may be optimal to implement low punishments for failed coups, while adhering to the neutrality of the army. This is a second best solution, which will see coups by military leaders who share the ideology of the incumbent, at the expense of allowing coups against well-performing governments. This equilibrium requires that factionalisation within the military is sufficiently severe, so that left-wing followers block a coup against a bad government out of fear that the initiators might be right-wing. This parameter range is consistent with the recent coup history of Venezuela (1992).

In an extension of the baseline framework, it can be shown that assumptions on the information structure of the game can be rationalised as outcomes of a communication game in which officers can choose to reveal their types or not. In particular, leaders have an incentive to hide their political affiliation, while followers would like to reveal their political affiliation. This result is important because the incentive for followers to reveal their type implies that institutions need to be put in place in order to keep the military neutral.

Third, there is a case in which institutions do not matter, because ideologies are perfectly observable (for instance because they correspond to ethnicity). This yields a unique equilibrium, characterised by high coup frequency and coup attempts against both good and bad governments. This result is consistent with the case of Nigeria (1966-2000).

Finally, relaxing the assumption that any military government has a higher quality than a bad incumbent government, the model can be altered to provide an account of "extremist" factions within the military. This extension highlights that the moderator pattern of civil-military relations, which relies on the willingness of military officers to support their leaders against poorly performing incumbents, necessarily puts countries at risk of take-overs by an extremist faction. In this set-up, it is optimal to prevent any type of coups under very weak assumptions. This extension may explain the gradual move away from the institutional and constitutional promotion of coups.

## 4 The baseline model

### 4.1 Set-up

Consider an incumbent government, indexed  $g$ , who is passive and has a left-wing ideology ( $I_g = L$ ) without loss of generality. The government can be high quality ("good") or low quality ("bad"), which is indicated by a quality variable  $Q_g \in \{-1, 1\}$ .  $Q_g$  is known to all players. To carry out welfare

analysis, a prior of the government being good is introduced:  $\Pr(Q_g = 1) = \gamma$ .

There are two players in the model: the leader and the follower, indexed  $i$  (for initiator) and  $f$  (for follower) respectively.<sup>17</sup> The leader moves first and decides whether or not to stage a coup, the follower then decides whether or not to support the coup. A coup succeeds if and only if the leader takes the initiative and the follower supports the coup. Both officers are characterised by an ideology variable  $I_j \in \{L, R\}$ ,  $j = i, f$ . Every officer knows his own ideology, but cannot observe the other player's ideology directly. The priors are common knowledge and given by:

$$\begin{aligned}\Pr(I_i = L) &= \alpha \\ \Pr(I_f = L) &= \beta\end{aligned}$$

The follower receives a private signal  $t \in \{L, R\}$  about the leader's type, while the leader receives a private signal  $s \in \{L, R\}$  about the follower's type. The precision of the signal is common knowledge and given by:

$$\begin{aligned}\Pr(t = x | I_i = x) &= \mu = \frac{1}{2}, x \in \{L, R\} \\ \Pr(s = x | I_f = x) &= \sigma, x \in \{L, R\}\end{aligned}$$

The signal about the leader's type,  $t$ , is uninformative, i.e.  $\mu = \frac{1}{2}$ , while the precision of the signal about the follower's type is in the range  $\frac{1}{2} \leq \sigma \leq 1$ .<sup>18</sup> At this stage, the openness of political affiliation is captured in a reduced form by the signal precision  $\sigma$ .

If  $i$  stages a successful coup, he is characterised by his quality in office,  $Q_i$ .  $Q_i$  is ex ante unknown and  $E(Q_i) = 0$ .<sup>19</sup>

Officers derive utility from the government's quality,  $Q$ , and from its ideology, through an indicator function  $\iota$  which takes on value one if an officer shares the ideology of the government.  $\phi$  measures the importance of ideology. The assumption that  $\phi$  is the same for both left-wing and right-wing officers

<sup>17</sup>An example of an initiator would be the general in charge of the army division stationed in the capital. We may think of the follower as the officer in charge of the main army division outside the capital.

<sup>18</sup>In section 2, an explicit microfoundation is provided for these parameter restrictions: in an extended model, leaders want to hide their types, while followers would like to reveal their types. Importantly, this implies that institutionally restricting the openness of political affiliation matters, since it will counter the incentive of followers to reveal their types.

<sup>19</sup>This assumption can be relaxed without affecting any of the (qualitative) results, as long as  $-1 < E(Q_i) < 1$ .

can be relaxed without changing the key results. A leader staging a failed coup faces a punishment  $P > 0$ , which is not conditional on the quality of the incumbent. As argued above,  $P$  will depend on the general legitimacy of coups: countries that allow for coups to occur under certain circumstances, will find it harder to credibly punish the plotters of failed coups. It is assumed that there is no punishment in case of a successful coup.<sup>20</sup>

The expected utility of a military officer of type  $j$  if a government of type  $k$  is in office is given by:

$$U_j = \begin{cases} -P + Q_k + \phi \iota(I_j = I_k), & \text{if } j = i \text{ and } i \text{ stages a failed coup} \\ \phi \iota(I_j = I_k) + Q_k, & \text{in all other cases} \end{cases}, \quad j \in \{i, f\}$$

The action to stage a coup attempt is given by  $a \in \{0, 1\}$ , where 0 stands for no coup attempt and 1 stands for a coup attempt. The decision to back up a coup attempt is given by  $b \in \{0, 1\}$ , where 0 stands for the decision to resist a coup attempt and 1 for the decision to support a coup.

The timing of the game is:

1. Nature draws the quality of the government,  $Q_g$ , the type of the leader,  $I_i$ , and the type of the follower,  $I_f$ .
2. The leader  $i$  receives signal  $s$  and chooses  $a$ . If  $a = 0$ , the game ends.
3. If  $a = 1$ , the follower chooses  $b$ . If  $b = 1$ ,  $i$  becomes the new government. If  $b = 0$ ,  $g$  remains in power and the coup fails.
4. Pay-offs  $(U_i, U_f)$  are realised.

## 4.2 The first best solution

In the model described here, "first best" control of the military over politics would imply that successful coups are staged if and only if the incumbent is poorly performing. This outcome maximises the expected government quality ( $E(Q)$ ), which will be our welfare measure and is insensitive to ideology.<sup>21</sup> It can be seen straightaway that inefficiency could stem from two possible sources. First, by not being able to condition punishments on government quality, there is a trade-off between allowing the military

<sup>20</sup>There are several cases of coup leaders being put on trial after they have left government. However, these trials often relate to crimes (such as human rights abuses) committed while in office, rather than to the act of staging a coup in itself.

<sup>21</sup>This assumption will be relaxed in section 4.

to intervene when it is desirable and allowing the military to intervene in case it is undesirable. For punishments to have a bite, there needs to be uncertainty about the success of the coup, which is introduced in this model by the uncertainty about the type of the followers. Second, even if punishments could be made conditional on the quality of the incumbent, then the followers may not support a coup against a poorly performing government (out of fear that the new military government will be of the opposing ideology). The first inefficiency may lead to either too many coups or too few coups, the last inefficiency can lead to too few coups. The next section contains a detailed description of the welfare optima given these potential inefficiencies.

### 4.3 Low factionalisation equilibria

This section deals with the case in which ideology is unimportant. In this case, both left-wing and right-wing officers may agree to oust a poorly-performing incumbent, even if there is uncertainty about the type of the leader.

#### 4.3.1 Positive results

The combination of signal precision  $\sigma$ , the strength of punishments  $P$  and the importance of ideology  $\phi$  will determine the optimal strategies for different types of leaders and followers. A first result is almost trivial: if ideology is less important than the quality of government ( $\phi < 1$ ), then the first best solution will always be reached. Leaders will stage coup attempts if and only if incumbents are bad, followers will support coup attempts if and only if leaders are bad.

**Proposition 1** *If  $\phi < 1$  perfect accountability is achieved for all parameters.*

**Proof.** See appendix. ■

In the region  $1 < \phi < \frac{1}{1-\alpha}$ , ideology becomes more important than government quality in the utility functions of military officers. As the followers do not have certainty about the type of the leader, they do not necessarily want to support a coup by a leader of unknown ideology, even if the government is bad. For the  $R$  followers this is not important, as they are always glad to see a poorly performing  $L$  government replaced, either by an "average" military  $L$  government or by an "average" military  $R$  government. In contrast, the  $L$  followers are worried that they may support a military leader of the  $R$  faction. The following condition guarantees that the  $L$  followers prefer to support a random military leader (who has a prior  $\alpha$  of being  $L$ ), against a poorly performing government:

$$\phi - 1 < \alpha\phi \Rightarrow \phi < \frac{1}{1 - \alpha} \quad (1)$$

This condition states that the pay-off from the incumbent (on the left hand side) is smaller than the expected pay-off of the military leader (on the right hand side), which is the sum of the expected quality (0) and the expected ideology pay-off. This latter component consists of the probability of facing an  $L$  leader ( $\alpha$ ) times the strength of ideology ( $\phi$ ). Hence, under condition (1), both types of followers can be united against a poorly performing government. The leaders can now anticipate the reaction of the followers, given that the latter believe that both leaders always stage a coup (which made  $\alpha$  the relevant prior). Now, it can easily be seen that both the  $L$  leader and the  $R$  leader want to topple the poorly performing incumbent if they would be supported in such attempts. They know that, on average their rule will be better in the general interest dimension than the rule of the incumbent. Also, they can anticipate the ideology of their own regime. Hence, there is a Perfect Bayesian pooling equilibrium in which both types of leaders stage a coup attempt, which is always supported if followers form beliefs consistent with these equilibrium strategies. This reasoning proves the first part of the following result:

**Proposition 2** *If  $1 < \phi < \frac{1}{1-\alpha}$  ("low factionalisation") and  $Q_g = -1$  ("bad incumbent"), there exists a pooling equilibrium in which both  $L$  and  $R$  military leaders stage coup attempts against poorly performing incumbents and both  $L$  and  $R$  followers support such attempts. This pooling equilibrium Pareto dominates all other equilibria.*

**Proof.** See appendix. ■

However, this does not guarantee the first best solution, as  $R$  leaders may want to stage coups against well-performing governments. This is because ideology is more important than government quality. If the incumbent is good,  $L$  followers will never support a coup, whereas  $R$  followers will always support a coup.  $L$  leaders will never want to stage a coup against a good government, but  $R$  leaders may bet on the followers being  $R$  and attempt a coup against a good incumbent. Given these incentives, any equilibrium with coup attempts against a good government will be separating in the leader's type.

**Proposition 3** *If  $1 < \phi < \frac{1}{1-\alpha}$  ("low factionalisation") and  $Q_g = 1$  ("good incumbent"), the only pure strategy equilibrium sees only  $R$  followers supporting coups and  $L$  followers never supporting coups.*

The optimal strategy for the  $L$  leader is to never stage coups. The optimal strategy of the  $R$  leader is determined by  $P$  and  $\sigma$ , for which there exist thresholds  $\underline{P}$ ,  $\bar{\sigma}_R(P)$  and  $\bar{\sigma}_L(P)$  such that:

- $P < \underline{P}$  and  $\sigma < \bar{\sigma}_L(P)$ :  $R$  leader stages coup if  $Q_g = 1$
- $P > \underline{P}$  and  $\sigma < \bar{\sigma}_R(P)$ :  $R$  leader never stages coup if  $Q_g = 1$
- $\sigma > \max\{\bar{\sigma}_R(P), \bar{\sigma}_L(P)\}$ :  $R$  leader stages coup if  $Q_g = 1$  and  $s = R$

**Proof.** See appendix. ■

### 4.3.2 Institution design

The positive results now easily allow us to identify the parameter region in which the first best solution is achieved.

**Corollary 4** *If  $1 < \phi < \frac{1}{1-\alpha}$  ("low factionalisation"), there exists threshold  $\underline{P}$ ,  $\bar{\sigma}_R(P)$  and  $\bar{\sigma}_L(P)$  such that for  $P > \underline{P}$  and  $\sigma < \bar{\sigma}_R(P)$ , the first best is achieved.*

This result can partly rationalise the institutions I presented under the stylized facts. While not allowing information on political affiliation to be revealed is consistent with optimal control of the military over politics in my model, it also prescribes punishments that are higher than those observed in reality.

### 4.3.3 Case studies

Both the cases of Chile (1971-1980) and Peru (1946-1970) fit into the "low factionalisation" parameter range, of which the crucial characteristic is that different factions within the army can be united against a poorly performing incumbent. In Peru, general Odria removed a mildly left-wing president from power in 1948, on accusations of being too soft on violent militants. This latter position was widely supported within the army. In 1962, the army briefly intervened to settle an election with unclear results. It installed Belaunde as a president, a left-wing populist who later sought a coalition with conservative politicians. In 1968, the army ousted Belaunde, over a deal with the International Copper Cooperation of which the unfavourable clauses were kept secret. This deal was unacceptable to most Peruvians, and the leading general, Velasco, could easily find sufficient support for his coup. In all cases, the interventions of the military were widely welcomed by the Peruvian public and Peru did not see any coups against governments that were perceived to be well-performing. Also, Peru did not

see any failed coup attempts within this period. These two elements are consistent with the  $\phi < \frac{1}{1-\alpha}$  parameter range described above. In further support of our approach, Philip (1978) reports that the Peruvian army was factionalised between left-wing radicals and right-wing conservatives. Nevertheless, these political affiliations were effectively kept secret. The key to the success of the coup attempts against poorly performing governments was the fact that both factions were willing to take the risk of supporting a coup leader of ex ante unknown ideology. This was a relevant trade-off, as is illustrated by the fact that General Velasco turned out to promote radical policies which "[...] would have been too extreme for most officers who supported the coup".<sup>22</sup> Thus the relevant parameter range seems to be  $1 < \phi < \frac{1}{1-\alpha}$ , in which the faction of the army that was ideologically closest to the incumbent government prefers the incumbent to a new government of opposing ideology.

Chile seems to have found itself in a similar equilibrium when Pinochet took power in 1973. His move was widely supported by large segments of the population and a strong majority within the military (Philip, 1985, p308). Historical evidence suggests that the main division within the military was between officers with Christian democratic sympathies and right wing conservatives,<sup>23</sup> but at the time these affiliations were strictly secret (Philip, 1985, p307). The moderate Christian group seemed to have had the strongest support, but once installed in power, Pinochet turned out to belong to the second group. As Philip indicates, it is highly unlikely that Pinochet would have gained the support of the military if his views were known before the coup. As in Peru, the relevant equilibrium range seems to have been  $1 < \phi < \frac{1}{1-\alpha}$ , where the faction ideologically closest to the incumbent government would not support a coup from the opposing faction in a complete information world, but is willing to take the risk of supporting a "random officer" if a coup is staged against a poorly performing government.

In contrast to the secret affiliation in the Peruvian and Chilean military, the Brazilian military had "[...] in fact institutionalized military debate over public and political issues" (Stepan, 1971, p44). The most important forum was the Military Club in Rio de Janeiro, of which the biennial elections were traditionally fought over political issues. The three coups that succeeded in the 1950-1970 period all targeted a government with low legitimacy (Stepan, 1971, p108). However, Brazil did also see failed coups in this period. The two failed coups both tried to prevent a newly elected politician from assuming power. As these governments had not revealed their quality yet, these coups are unlikely to have been staged in the general interest. This suggests that Brazil was in an equilibrium with

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<sup>22</sup> Philip, 1978.

<sup>23</sup> Assuming that the Christian Democrats shared Allende's ideology, as we implicitly do here, is a simplification. However, Philip (1985) suggests they would have preferred Allende to Pinochet, if they had known his agenda.

$1 < \phi < \frac{1}{1-\alpha}$ , but its open political debate put  $\sigma$  in the range where  $\sigma > \bar{\sigma}_R$ . Therefore, factions not sharing the government's ideology ( $R$ ) were willing to act upon a favourable signal ( $s = R$ ) and stage coups against governments that were not poorly performing and had a high degree of legitimacy. This suggests that Brazil was not at its institutional optimum and could have prevented these coup attempts (and the risk of them being successful) by having less open political affiliation.

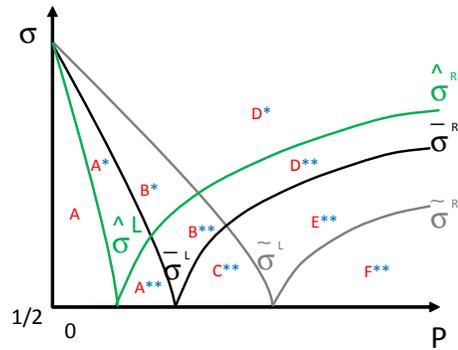
#### 4.4 High factionalisation equilibria

In this section, ideology is so important that the military can no longer be united against a bad government.

##### 4.4.1 Positive results

$\phi > \max(\frac{1}{1-\alpha}, 2)$  implies that the  $L$  follower is no longer willing to back a coup attempt if both  $L$  and  $R$  types always try to oust the bad government. As a consequence, there are no pure strategy Bayesian equilibria in which the  $L$  follower supports a coup. The  $R$  follower, as before, will continue to support any coup. Therefore, the parameters of the model will only affect the optimal strategies of the leader. Deriving these optimal strategies boils down to an exercise of comparing the expected costs and benefits of staging a coup. The set of possible equilibria that can be attained by manipulating punishments and signal precision can be represented in a diagram that delineates the optimal strategies for each type of leader for each possible signal, the relevant quality of the incumbent and any combination of  $P$  and  $\sigma$ .

The optimal strategy space of each type of leader in a particular situation is delineated by a V-shaped curve in the  $(\sigma, P)$ -space. For example, the  $(\hat{\sigma}_L, \hat{\sigma}_R)$  curves divide the strategy space in different optimal strategies for an  $L$  leader who faces a bad government, upon receiving an  $L$  or  $R$  signal respectively. In the region below the  $\hat{\sigma}_L$  curve, signal precision and punishments are sufficiently low, so that left-wing leaders are still willing to stage coups against bad incumbents regardless of the signal (region  $A$ ). As left-wing followers no longer support coups, the  $L$  leaders count on the support of right-wing followers instead. Therefore, if signal precision rises above the  $\hat{\sigma}_L$  and  $\hat{\sigma}_R$  curves (regions marked with a "\*\*"), the  $L$  leader is only willing to stage coups if he receives a favourable signal, i.e. that the followers are right-wing. Finally, if we move underneath the  $\hat{\sigma}_R$  curve (the regions marked with "\*\*\*"), the  $L$  leader will never stage a coup as the signal has become unreliable and the punishments for failure are too severe. Similarly the  $(\bar{\sigma}_L, \bar{\sigma}_R)$  curves describe the optimal strategies of an  $R$  leader



Strategies of L leader:

- \*\* No attempt
- \* Attempt against bad incumbent for  $s=R$
- unmarked Attempt against bad incumbent for any signal

Strategies of R leader:

- A: Attempt against any incumbent for any signal
- B: Attempt against bad incumbent for any signal;  
attempt against good incumbent for  $s=R$
- C: Attempt against bad incumbent for any signal;  
no attempt against good incumbent
- D: Attempt against any incumbent if  $s=R$
- E: Attempt against bad incumbent if  $s=R$ ;  
no attempt against good incumbent
- F: No attempts

Figure 1: Delineation of optimal strategies for leaders under high factionalisation.

facing a good government. Finally, the  $(\tilde{\sigma}_L, \tilde{\sigma}_R)$  curves describe the optimal strategies of an  $R$  leader facing a bad government. Combined in the same diagram, the ordering of the  $(\hat{\sigma}_L, \hat{\sigma}_R)$ ,  $(\bar{\sigma}_L, \bar{\sigma}_R)$  and  $(\tilde{\sigma}_L, \tilde{\sigma}_R)$  curves is intuitive given their explanation:  $L$  officers  $(\hat{\sigma}_L, \hat{\sigma}_R)$  are less coup prone than  $R$  leaders facing a good government  $(\bar{\sigma}_L, \bar{\sigma}_R)$ , who are in turn less likely to stage a coup than  $R$  leaders facing a bad incumbent  $(\tilde{\sigma}_L, \tilde{\sigma}_R)$ .

#### 4.4.2 Institution design

Figure 1 clearly demonstrates the trade-off between holding governments accountable and overshooting by ousting good governments. The equilibria in which the  $L$  leader stages a coup if and only if the incumbent is poorly performing (the first best  $L$  strategy), imply necessarily that the  $R$  leader will stage coups against good governments. This follows from the fact that the utility functions are dominated by the ideology component. Therefore, the first best is no longer achievable. Comparing the properties of each possible equilibrium with the first best benchmark, it can easily be established that the parameter ranges in figure 1 can be ordered as follows in terms of the expected quality of government ( $E(Q)$ ):

$$\begin{aligned}
 A &> A^* > A^{**} \\
 B^* &> B^{**} \\
 B^* &> D^* \\
 C^{**} &> B^{**} > D^{**} \\
 C^{**} &> E^{**} > F^{**}
 \end{aligned}$$

This leaves three candidates for a welfare optimum. First, there is an equilibrium with low punishments and low signal precision ( $A$ ), in which the  $L$  leader stages a coup if and only if the government is bad and the  $R$  leader always stages a coup attempt. These attempts are successful whenever the follower is  $R$ . Second, there is an equilibrium with intermediate punishments and high signal precision ( $B^*$ ), in which both  $L$  and  $R$  leader condition their responses on the signal. Only if the signal is favourable, the  $L$  leader attempts a coup against a bad government and the  $R$  leader attempts a coup against the good government. Against a bad government, the  $R$  leader will still stage a coup attempt regardless of the signal. Finally, there is an equilibrium with low signal precision and intermediate punishments ( $C^{**}$ ), in which only  $R$  leaders stage coups and they do so if and only if the incumbent is bad. The following proposition states that only ( $A$ ) or ( $C^{**}$ ) can be optimal.

**Proposition 5** *If  $\phi > \frac{1}{1-\alpha}$ , we can define thresholds  $\hat{P}$ ,  $\underline{P}$ ,  $\bar{P} > 0$  and  $\tilde{\sigma}_L \geq \frac{1}{2}$ , such that the combinations of  $P$  and  $\sigma$  yielding pure strategy Bayesian equilibria which (weakly) maximise  $E(Q)$  are given by:*

1. *If  $\alpha \leq \gamma$ :  $\underline{P} < P < \bar{P}$ ,  $\sigma < \min(\tilde{\sigma}_L, \bar{\sigma}_R)$ . In the corresponding equilibrium an  $L$  leader never stages a coup attempt, an  $R$  leader stages a coup attempt if and only if the incumbent is bad. An  $L$  follower never supports a coup; an  $R$  follower supports any coup (Equilibrium  $C^{**}$ ).*
2. *If  $\alpha \geq \gamma$ :  $P < \hat{P}$  and  $\sigma < \bar{\sigma}_L < \tilde{\sigma}_L$ . In the corresponding equilibrium an  $R$  leader always stages a coup. An  $L$  leader stages a coup if and only if the government is bad. An  $L$  follower never supports a coup; an  $R$  follower supports any coup (Equilibrium  $A$ ).*

**Proof.** See appendix. ■

This proposition implies that it is never optimal to have open political debate if both punishments and signal precision can be manipulated. Note that the level of punishments does not affect the welfare function directly (it only affects the equilibrium chosen), whereas the signal precision has a direct impact by determining the likelihood of correct recognition of the followers (and, hence, the probability of successful coups). Given that signal precision directly enters the probability of certain equilibria, its effect should be monotonic. This means that either the highest signal precision or the lowest signal precision consistent with this equilibrium must be optimal. However, in terms of the equilibrium outcome,  $B^*$  with  $\sigma = 1$  is equivalent to  $A$ . This means that  $A$  is weakly preferred to  $B^*$ , and strictly preferred, as soon as we rule out the cut-off case of perfect precision ( $\sigma = 1$ ). It is shown in the appendix that limiting  $\sigma$  is only optimal within equilibrium  $B^*$  if it is better to discourage coups. But if coups need to be discouraged, than equilibrium  $C^{**}$  beats  $B^*$ .

Comparing the remaining candidates ( $A$  and  $C^{**}$ ), the advantage of the equilibrium  $C^{**}$  (intermediate punishments) is that a good government is never ousted. The precision of the signal is sufficiently low and punishments are sufficiently high, so that the  $R$  leader only stages a coup attempt against a bad incumbent, regardless of the signal. The disadvantage is that a leader of the same ideology of the government will never challenge a bad government. He will find the punishments too high and the information he has about the followers' political stance too scarce to ever attempt a coup. In equilibrium  $A$  (low punishments) the  $L$  leader is willing to act against a bad government. However, this also implies that the  $R$  leader is willing to oust a good government under any signal. Which equilibrium dominates depends on whether  $\gamma < \alpha$ . If  $\gamma < \alpha$ , the probability of the government being good is

smaller than the probability of the leaders being of type  $L$ . Hence, the optimal equilibrium has coups against bad governments staged by the  $L$  leader at the cost of introducing  $R$ -led coups against good governments. If  $\gamma > \alpha$ , the probability of the government being good ( $\gamma$ ) is higher than the probability of the leader being of the  $L$  type ( $\alpha$ ). Hence, the optimal equilibrium will have no coups against the good government at the cost of not having any coups by  $L$  leaders against the bad government.

These results are consistent with some of the stylized facts. Armies should be politically neutral, and punishments for failed coups should be limited. The result on political neutrality is the most robust finding, as a best case for open political affiliation was made. Also, comparing the expected quality of government under low and high factionalisation equilibria, the optimum under low factionalisation clearly dominates the optimum under high factionalisation. Therefore, institution design could in theory address the degree of factionalisation within the military, and there are institutions that seem to fulfil exactly this role. For instance, military training places emphasis on the development of a "military identity" that complements and possibly replaces any identities previously held by officers (Philip, 1985, p177-200). Also, recruitment policies may aim at attracting a homogenous set of candidates. While I focus on the neutrality of the army at the level of individual officers, the neutrality of the military as an institution may be seen as an institutional arrangement that makes it easier for soldiers to identify with "military values" and abandon earlier views.

#### 4.4.3 Case studies

The case of Venezuela (1992) can illustrate these results. In the late eighties the Venezuelan economy was severely hit by a decline in oil prices. Carlos Andres Perez's government was alleged to be highly corrupt and had reneged on campaign pledges to push through a series of unpopular reforms (Norden, 2001). Against this background, Hugo Chavez staged a coup attempt in 1992. Chavez' coup failed because he did not have the support of key players within the army. Importantly, political affiliations other than links with the leading AD party (Acción Democrática) were not allowed to be shown within the military (Norden, 2001, p121). Gott (2005, p64) indicates that Chavez only knew that he had the support of about 10% of the army. He did not have any clues about the views of the remaining 90%. In terms of this model, it may have been that some conservative officers would actually like to oust Andres Perez as well. The failure could then be explained by the fact that Venezuela was in the high factionalisation range ( $\frac{1}{1-\alpha} < \phi$ ). In this range, the majority of the army, which proved to be of the same ideology as the government, chose not to back a coup leader of ex ante unknown political

affiliation: Hugo Chavez. In the aftermath of the failed coup, Hugo Chavez was put on trial and given a long prison sentence, but the wide-ranging amnesty powers of the president allowed the successor of President Perez to set him free after only two years (Gott, 2005, p119).

Evaluating the military institutions of Venezuela, the condition  $\gamma > \alpha$  may have been satisfied in Venezuela, implying that the average quality of incumbents is sufficiently high relative to the probability of the coup leader sharing the ideology of the incumbent. As indicated in proposition 4, it is optimal to have an equilibrium with political neutrality in this range. Also, the expected punishments for a failed coup may have been sufficiently low to induce a coup attempt, assuming that Chavez anticipated his relatively mild punishment. The failure of this coup, which was due to the strong position of conservatives in the army, could not have been prevented by changing either  $P$  or  $\sigma$ .

## 5 A theory of political affiliation

This section develops a theory of the disclosure (or hiding) of political affiliation. This analysis endogenises "talking politics". It provides a microfoundation of earlier assumptions and suggests a specific institutional framework which can implement the equilibria found before. The proposed game boils down to an application of a standard communication game, in which I introduce a cost to eliminate cheap talk results.

### 5.1 Model

The model builds on the one introduced in section 1. The signals are now abandoned and replaced by a message from the leader. To this aim, a stage is added to the game in which the leader can send a message about his type:  $\hat{I}_i \in \{R, L, N\}$ . The option to announce  $N$  has to be interpreted as remaining neutral. This option can be attractive for officers if there is a cost to lying about one's type. This cost of lying is captured by  $\xi$ , satisfying  $0 < \xi < \phi - 1$ . The utility function of  $i$  is:

$$U_i = \begin{cases} -P + Q_k, & \text{if } i \text{ stages a failed coup} \\ \phi \iota(I_i = I_k) + Q_k - \iota(\hat{I}_i \neq I_i)\xi, & \text{in all other cases} \end{cases}$$

The follower can also reveal his type  $\hat{I}_f \in \{R, L, N\}$ . For the follower, no cost of lying is assumed (as this would only strengthen our results). The utility function of  $f$  is:

$$U_f = \phi v(I_f = I_k) + Q_k, \quad \text{in all other cases}$$

This game is now the same as before, augmented with a communication stage. The timing of the game is now:

1. Nature draws the type of the leader,  $I_i$ , and the type of the follower,  $I_f$ .
2. The leader announces his type  $\hat{I}_i$  and the follower announces  $\hat{I}_f$  simultaneously.
3. Nature draws the quality of the government,  $Q_g$
4. The leader  $i$  receives signal  $s$  and chooses  $a$ . If  $a = 0$ , the game ends.
5. If  $a = 1$ , the follower  $f$  chooses  $b$ . If  $b = 1$ ,  $i$  becomes the new government. If  $b = 0$ ,  $g$  remains in power and the coup fails.
6. Pay-offs  $(U_i, U_f)$  are realised.

Solving this problem by backward induction, officers in the communication stage anticipate the positive results derived earlier. The following proposition states that followers prefer to reveal their ideology.

**Proposition 6** *For  $\phi > 1$ , the only pure strategy equilibrium communication is separating in the follower's type.*

**Proof.** The  $R$  follower would like to reveal his type in order to attract coup attempts against the incumbent. The  $L$  follower can always block a coup attempt so has no strategic incentives in the communication stage. As soon as the  $L$  follower chooses a pure strategy message, there is an separating equilibrium in which the  $R$  follower chooses a different pure strategy message. This result holds regardless of the communication strategy of the leader. ■

Turning to the communication strategy of the leader, it is intuitive that all messages will be uninformative in a pure strategy equilibrium. Suppose there is an equilibrium in which  $\hat{I}_i(I_i) = I_i$ . Then an  $R$  leader is never supported by  $L$  followers if  $Q_g = -1$ . The  $L$  leader is always supported by  $L$  followers if the government is bad. Therefore, the  $R$  leader is strictly better off by deviating and announcing  $\hat{I}_i(R) = L$ . Therefore  $\hat{I}_i(I_i) = I_i$  cannot be an equilibrium. This result holds regardless of

the communication strategy of the followers: even if the followers reveal their types, the leader cannot rule out the followers being  $L$  when they decide to show their affiliation or not.<sup>24</sup>

**Proposition 7** *For  $1 < \phi < \frac{1}{1-\alpha}$ , the only pure strategy perfect Bayesian equilibria that satisfy the intuitive criterion have  $\hat{I}_i(R) = \hat{I}_i(L) \in \{L, N\}$ .*

*For  $\phi > \frac{1}{1-\alpha}$ , the only pure strategy perfect Bayesian equilibrium has  $\hat{I}_i(R) = \hat{I}_i(L) = N$ .*

**Proof.** See appendix. ■

This proposition explicitly states an insight used in the previous section: the leaders have an incentive to conceal their true types. For  $\phi < \frac{1}{1-\alpha}$ , coups against a bad incumbent are always supported by any type of followers in this parameter range. This equilibrium relies on the secrecy of political affiliation. The cost of lying (in combination with the intuitive criterion) makes sure that leaders pool by both claiming to be  $L$  or to be neutral. From an equilibrium in which both types of leaders claim to be  $R$ , only an  $L$  leader would strictly prefer to deviate under the belief that he is  $L$ . For  $\phi > \frac{1}{1-\alpha}$ , ideology is so important that  $L$  followers are not willing to support a coup if both  $L$  and  $R$  leaders stage coups if  $Q_g = -1$ . Again, the cost of lying allows us to rule out certain messages, in this case only viable equilibrium is characterised by  $\hat{I}_i(R) = \hat{I}_i(L) = N$ . In this case, the equilibrium of both officers claiming to be left-wing is not sustainable. As the  $R$  leader is not supported by  $L$  followers anyway in equilibrium, he would deviate to claim to be neutral or  $R$  in order to prevent the cost of lying under any out-of-equilibrium belief.<sup>25</sup>

## 5.2 Case studies

The insight that coup plotters should refrain from having open political affiliations is emphasized in Luttwak's (1968) practical coup manual. An illustration of this theory can be found in the biographies of generals Pinochet, Velasco and Chavez. None of these coup leaders revealed their affiliations before they successfully assumed power. Velasco had clear links with the conservative elements in society and concealed his radical left wing sympathies (Philip, 1978, p43). He seems to have been in the pooling equilibrium where leaders claim to be of the incumbent government's ideology. Chile's general Pinochet concealed his right wing ideology as well and kept a neutral profile (Philip, 1985). Hugo Chavez did not have an openly left wing agenda either when he staged his 1992 coup (Norden, 1992).

<sup>24</sup>The condition  $\xi < \phi + 1$  guarantees that the cost of lying is not too large to prevent leaders of type  $R$  to lie.

<sup>25</sup>All these results hold for an arbitrarily small  $\xi > 0$ .

In line with the earlier hypothesis that Venezuela is best described by the  $\phi > \frac{1}{1-\alpha}$  region, Chavez was neutral and had not clearly associated himself with conservative ideologies.

An important conclusion is that this section justifies my so far implicit assumption that institutions can alter the actual openness of political affiliation (i.e. changing  $\sigma$ ). As followers have an incentive to reveal their types, only appropriate institutions will prevent them from doing so. In principle, these institutions could be developed entirely within the armed forces, in line with Huntington's ideal of a professional, autonomous military (Huntington, 1981). However, the analysis in this section points at the tension between an independent army and the incentives that shape political communication within the army. This may call for targeted civilian control over the army. For instance, purging powers can be granted to a government that aims to prevent coups. As coups are more likely if the followers show their affiliation, a government that wants to avoid coups will have an incentive to discourage officers from revealing their (diverging) political views. As indicated earlier, the military in Brazil (1950-1970) and Venezuela (1980-2002) differed strongly with regard to their openness of political affiliation. One can compare the promotion structures of both militaries to illustrate the hypothesis that different degrees of open political affiliation can be implemented by varying the government's control over promotions. Throughout the period 1958-1998, Venezuelan officers were expected to be of the leading political parties' ideology or not to hold any political views at all. The congress had strong powers over military appointments, which was seen as an explicit strategy to reduce the armies' threat to intervene (Norden, 2001, p126; Trinkunas, 2001, p171). In this context, Chavez' activities, which are reported to have started in the late seventies, had to remain secret (Norden, 2001, p122). Chavez had little information about his overall support within the army and Norden ascribes the failure of the coup partly to the unwillingness of the coup plotters to approach extra officers (Norden, p120). In contrast, at least until 1962, the Brazilian army had a largely independent promotion structure mainly based on achievement in the military academy (Stepan, 1971, p51). The limited direct influence of the government on army promotions was necessary to allow officers to take open political stances.

## 6 Extensions

### 6.1 Perfectly observable types

Finally, I will present the positive results of this model for the case in which institutions do not matter because types are directly observable. This seems an appropriate assumption if ethnicity or regional

origins form the most important political dimension, as these types cannot be concealed. Going back to the full model of section 1 and reintroducing the drawing of  $I_i$ , this implies:  $\mu = \sigma = 1$ .

**Proposition 8** *If  $\phi < 1$ , then there is a coup attempt if and only if  $Q_g = -1$  and followers always support this coup. If  $\phi > 1$ , then there is a coup attempt from an R leader whenever the follower is observed to be R. There is an attempt from an L leader whenever  $Q_g = -1$ . The L follower only supports a coup by the L leader. The R follower supports any coup.*

This proposition is a direct corollary of earlier results. To summarise, in countries where the main conflict is along ethnic lines, military coup attempts are expected: (1) to target both well-performing and poorly performing governments; (2) to be frequent, possibly in spite of severe punishments; and (3) not to fail.

An illustration of this case is Nigeria. Nigerian politics have been dominated by ethnic conflicts ever since its independence. The Nigerian military recruited in all regions and, as is clear from the account of Alli (2000), the regional affiliation of military officers was easily observable. Typically, Northern officers dominated the army and used this position to block the South to gain more influence in politics (Luckham, 1974). First, as predicted by my model, Nigeria saw coups both against poorly performing governments and well-performing governments.<sup>26</sup> For instance, Nigeria's first coup, in 1966, was entirely driven by the sectional interests of Ibo officers who aimed to overthrow a government which was dominated by Muslim leaders. However, Northern officers also removed the Northern General Gowon from office in 1975, because he did not deal effectively with the economic crisis. A second prediction of our model is a high frequency of coup attempts. Nigeria faced nine coup attempts in the period 1966-2000, even though the leaders of the two (off equilibrium) failed coups were all executed. Also, of these nine coup attempts, only two failed. Therefore, the case of Nigeria closely fits the predictions of our model. Also, the analysis may explain the empirical result of Collier and Hoeffler (2007) that ethnic dominance, in the sense that one ethnic group accounts for more than 45% of the population, leads to significantly higher coup risk. The authors do not provide an explanation for this result, but their variable ethnic dominance can be expected to be correlated with ethnic polarisation, as I discussed here.

In conclusion, the case of observable types yields several benchmark predictions that naturally lend themselves to empirical testing. However, the scope for institution design is extremely limited in this

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<sup>26</sup>The coup attempts I consider are: January 1966, July 1966, 1975, 1976, 1983, 1990, 1993, 1995. Of these attempts the 1976 and 1995 attempts failed. (Alli, 2000, p.211-224)

case, as political affiliations are open by default.

## 6.2 Introducing an extremist faction

Relaxing the parametric assumptions in earlier sections, coups can be undesirable for two main reasons: (1) coups could target a well-performing government, or (2) coups could replace any government with a regime that is even worse.<sup>27</sup> The assumption that a military government is always better than a bad incumbent means that I discarded the latter possibility earlier. The welfare function that was proposed was not sensitive to ideology. However, it is conceivable that a faction of the army does not promote the general interest and less so than the incumbent government. Such factions can be thought of as "extremists", who prefer policies that are unacceptable to society at large.

The model can now be re-interpreted by assuming that the military consists of left-wing moderates and right-wing extremists, whereas the government is moderately left-wing. The positive results derived earlier will carry through. However, a new welfare function will now assign a positive value to the ideology of the incumbent, for instance by including  $\phi$  ( $\phi > 1$ ). Under this assumption, the institutions that maximise expected government quality will promote coups by moderate officers if and only if the incumbent is bad but discourage coups by right-wing officers. This means that the first best is no longer achievable, even if factionalisation within the military is low, because the right-wing extremists stage coups in the underlying equilibrium whenever the government is poorly performing. This same solution, which was characterised by high punishments and low political openness, will now be the second best optimum though, as no other institutional setting prevents coups more effectively in the case of low factionalisation. The concept of "extremism" may appear to be at odds with the notion of "low factionalisation" ( $\phi < \frac{1}{1-\alpha}$ ). Nevertheless, ideological views within the army could be close to each other, in particular if the military's corporate interests are taken into account. Furthermore, the "low factionalisation" parameter range could be consistent with substantial ideological differences (high  $\phi$ ) in combination with a sufficiently low ex ante probability of an extremist coup leader (low  $1 - \alpha$ ). In a richer game, followers could gradually learn about the distribution of  $\phi$  in the universe of coup plotters. If extremism enters the welfare function, the high factionalisation range will have a different optimal solution in comparison to the earlier results. It can be seen straightaway that it may no longer be optimal to limit punishments, as an equilibrium with high punishments and political

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<sup>27</sup>The strong economic growth of Chile under Pinochet contrasted sharply with the economic crisis during the Allende regime. Nevertheless, it would be reasonable to adopt a social welfare function that gives more weight to the human rights abuses of the Pinochet regime than to Chile's economic growth experience.

neutrality has no coup attempts by right-wing officers and beats an optimum with limited punishments in which a right wing leader stages a coup if and only if the incumbent is poorly performing.

As an illustration, Brazil was characterised by repeated take-overs (in 1945 and 1956) initiated by moderate factions within the military who quickly organised a return to democracy until the 1964 coup saw the military taking over government for the next 21 years. The military government of Brazil was responsible for at least 339 disappearances and assassinations, on top of wide-spread torturing and jailing of political opponents. While the initial coup leader, General Castello Branco was moderate and committed to democratisation (Stepan, 1971, p234), his position in the army was too weak to prevent hard-line officers to influence his policies and eventually replace him in 1968. It can be argued that Brazil's policies did not consider a welfare improvement over the -arguably poorly performing- Goulart government the military replaced in 1964. My analysis suggests that this outcome could result from the same equilibrium that underlaid the relatively benign "moderator role" of the military in earlier years. If the  $L$  faction is interpreted as prodemocratic elements within the military and the  $R$  faction as officers with antidemocratic ideals and a repressive agenda, then my model suggests that any equilibrium in which  $L$  followers are willing to oust bad governments, also allows  $R$  followers to oust bad governments. Therefore, the break-down of the "moderator pattern", in which the military intervenes for short periods without fundamentally changing democratic institutions can be understood as an inevitable consequence of the equilibrium underlying interventions of a moderate faction of the military. Once "moderate" officers learn about the distribution of "extremist ideologies", they may no longer be willing to support any coup leader. This may shift the equilibrium to the high-factionalisation range, in which coups are rarer and more effectively prevented by institutionalising high punishments and low political openness.

## 7 Interpretation

### 7.1 Ordering political institutions

An important limitation of the theoretical framework introduced in this paper is its seemingly paradoxical assumptions on the strength of political institutions. It was argued that the military could be a de facto moderator if political institutions are sufficiently weak. However, the subsequent analysis argued that for the military to be an effective arbitrator, political institutions must be sufficiently strong to generate credible civil military institutions. Such institutions can both ban open political

affiliations and credibly implement punishments for failed coup plotters. Given that the incumbent could have an obvious incentive to severely punish failed coup plotters, restraint in punishment could be a sign of relatively strong political institutions. In the example of Nigeria discussed earlier, all failed coup plotters were executed. Therefore, the poor coup performance of Nigeria could partially be due to poor political institutions as well. As a corollary, the military will be a poor arbitrator of domestic politics if political institutions are very weak. Hence, my theoretical framework suggests an ordering of political institutions. The analysis in this paper is most relevant if political institutions are in an intermediate range, sufficiently strong to constrain the behaviour of the military, but sufficiently weak to legitimise military interventions in politics. These institutional capabilities may change over time and the next subsection considers the recent break-down of the moderator pattern in more detail.

## **7.2 The breakdown of the "moderator pattern"**

It seems appropriate to revisit the central idea that military coups can effectively hold governments accountable. I argued that this idea was widely spread and de facto military influence over domestic politics remains strong. Therefore, I believe that this is an adequate assumption to make in modelling coup behaviour and understanding the evolution of civil-military institutions. Public opinion has recently become more sceptical about the beneficial effects of military intervention, as exemplified by the increasing constraints to the legitimacy of military power over politics. My analysis provides three explanations for such a shift in ideas. First, my model implicitly assumed a failure in holding governments accountable by other means than coups. If democracies have become more effective, then military coups may have become superfluous. Second, it may be that political elites or social planners have overestimated the expected quality of military interventions in the past. The experience of the brutal military regimes in Latin America or, more recently, in Burma, may have lowered the expectations about military rule. Finally, my model also suggests that the so-called "moderator pattern of civil military relations", in which the military intervenes for short periods without fundamentally changing democratic institutions, is only one possible outcome of the underlying equilibrium. Once officers are willing to support a leader of unknown quality against a bad government, they take the risk of supporting a leader with a hidden extremist agenda. The coup experiences of Brazil and Chile demonstrated how relevant this risk is. Ultimately, this risk is weighed against the cost of a poorly performing government. For this reason, coups may become less attractive as societies become more prosperous and moderate officers are no longer willing to bet on the ideology (or quality) of a military

coup leader.

## 8 Conclusion

This paper analyses the circumstances under which coups are aligned with the general interest. The analysis is based on three crucial assumptions. First, a military leader is assumed to be of average quality, so that a military intervention leads to higher government quality if the government is poorly performing. Second, it is assumed that the military is factionalised and politicised. Third, punishments are not conditional on government quality.

The main results are derived under the assumption that political affiliation is not directly observable. Focusing on the expected government quality as the objective function, the military is best in performing its role as a check on the government if ideological cleavages within the military are sufficiently limited and coup plotters are sufficiently likely to share the government's ideology. Once ideology becomes more important, the optimal institutional set-up has low or intermediate levels of punishments and no open political affiliation. This setting prevents coups against good governments that are driven by the factional interests of the opposition, while the sufficiently low punishments can induce the army to intervene if the government is poorly performing. In the special case of perfectly observable political affiliation, the model yields an equilibrium with high government turnover, in which coups are staged both against well performing and poorly performing governments.

The most important limitation of the current paper is probably its strong assumption on the form that punishments can take. It would be interesting to collect systematic data on how leaders of failed coups are punished and to develop a model that endogenises punishment and explains empirical patterns. The framework developed in this paper could provide a useful starting point for this analysis. A second, very natural extension would be to endogenise the quality of government (e.g. as a moral hazard problem). Nevertheless, the results of such an exercise can be expected to be qualitatively similar to the ones derived here.

The analysis in this paper can help to understand the factors that contribute to civilian control over the army. It was argued that the risk that is inherent to the moderator pattern of civil-military relations can explain the breakdown of this pattern. It also highlights how a combination of factionalisation and uncertainty about political views within the military can be an important driver of gradual demilitarisation of politics.

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## 9 Appendix

### Proof of proposition 1

Write  $U_i(a, I_i, s, Q_g)$  and  $U_f(b, I_f, I_i, Q_g | a = 1) = U_f(b, I_f, I_i, Q_g)$ .

Solve by backward induction by first deriving the strategy of the follower.

$$E[U_f(1, L, L, Q_i)] = \phi,$$

$$U_f(0, L, L, -1) = \phi - 1, U_f(0, L, L, 1) = \phi + 1.$$

$$E[U_f(1, R, L, Q_i)] = 0,$$

$$U_f(0, R, L, -1) = -1, U_f(0, R, L, 1) = 1.$$

Therefore both types of followers support a coup attempt by  $L$  iff  $Q_g = -1$ . Anticipating this, the  $L$  leader has:

$$U_i(1, L, L, -1) = U_i(1, L, R, -1) = \phi,$$

$$U_i(0, L, R, -1) = U_i(0, L, L, -1) = \phi - 1,$$

$$U_i(0, L, R, 1) = U_i(0, L, L, 1) = \phi + 1.$$

For the  $R$  leader this becomes:

$$U_i(1, R, L, -1) = U_i(1, R, R, -1) = \phi,$$

$$U_i(0, R, R, -1) = U_i(0, R, L, -1) = \phi - 1,$$

$$U_i(0, R, R, 1) = U_i(0, R, L, 1) = 1.$$

Therefore both  $R$  and  $L$  leaders stage a coup attempt if and only if  $Q_g = -1$ .

### Proof of proposition 2

See main text for a proof of the existence of the pooling equilibrium. Note that this equilibrium holds for any out-of-equilibrium belief. There is also a pure strategy separating equilibrium in which only the  $R$  type stages a coup attempt and only  $R$  type followers support coups, and there can also a mixed strategy equilibrium. These equilibria are all pareto dominated by the pooling equilibrium from the perspective of the military leaders, as in the pooling equilibrium bad governments are always ousted by both  $L$  and  $R$  leaders, whereas in the separating equilibrium only  $R$  leaders will attempt a coup if  $Q_g = -1$ , which only succeeds if they are supported by  $R$  followers. It is clear that both  $L$  and  $R$  leaders are worse off in this equilibrium. The same reasoning can be applied to prove that mixed strategy equilibria are dominated. Also, the mixed strategy equilibria break down for lower values of  $\phi$  than the pooling equilibrium, as they imply a probability of a coup leader being  $L$  which is smaller than  $\alpha$ .

### Proof of proposition 3

If  $Q_g = 1$ , only  $R$  followers will support a coup. Anticipating these reactions, the optimal strategy of the leader can be derived.

Write  $U_i(a, I_i, s, Q_g)$  and  $U_f(b, I_f, I_i, Q_g|a = 1) = U_f(b, I_f, t, Q_g)$ .  $I_i = R$  is fixed here. Staging a coup against a good incumbent following an  $L$  signal is optimal if:

$$\begin{aligned} E[U_i(1, R, L, 1)] &> U_i(0, R, L, 1) \\ \Leftrightarrow \frac{\sigma\beta}{\sigma\beta+(1-\sigma)(1-\beta)}(-P+1) + \frac{(1-\sigma)(1-\beta)}{\sigma\beta+(1-\sigma)(1-\beta)}(\phi) &> 1 \\ \Rightarrow \sigma > \frac{(1-\beta)(\phi-1)}{\beta P+(1-\beta)(\phi-1)} &\equiv \bar{\sigma}_L(P) \end{aligned}$$

Staging a coup against a good incumbent following an  $R$ -signal is optimal if:

$$\begin{aligned} E[U_i(1, R, R, 1)] &> U_{i,R}(0, R, R, 1) \Leftrightarrow \\ \frac{(1-\sigma)\beta}{\sigma(1-\beta)+(1-\sigma)\beta}(-P+1) + \frac{\sigma(1-\beta)}{\sigma(1-\beta)+(1-\sigma)\beta}(\phi+2\kappa-1) &> 1 \\ \Rightarrow \sigma > \frac{\beta P}{\beta P+(1-\beta)(\phi-1)} &\equiv \bar{\sigma}_R(P) \end{aligned}$$

Define  $\mathbb{P} \equiv \frac{(1-\beta)\phi-(1-\beta)}{\beta}$ . It can be shown that  $\mathbb{P} < \hat{P} < \bar{P}$  for  $\phi > 1$ . The following results can be derived:

$$\begin{aligned} P < \mathbb{P} &\Rightarrow \bar{\sigma}_R(P) < \frac{1}{2} < \bar{\sigma}_L(P) \\ P > \mathbb{P} &\Rightarrow \bar{\sigma}_L(P) < \frac{1}{2} < \bar{\sigma}_R(P) \end{aligned}$$

Proposition follows from here.

### Proof of proposition 5

$\phi > \frac{1}{1-\alpha}$  implies that the  $L$  follower never supports any coup attempt in equilibrium. For a pooling equilibrium, this result follows from the proof of proposition 3. We can rule out separating equilibria as well for  $\phi > \frac{1}{1-\alpha}$ . If the  $L$  follower only supports a coup with some probability as to make the  $L$ -initiator indifferent for  $s = R(L)$ , then the  $R$  initiator will always stage a coup for  $s = R(L)$  (as the  $R$  follower has a stronger incentive to stage a coup) and the expected utility of supporting a coup for an  $L$  follower will be even lower than in the case where both types always stage a coup. If the  $L$  follower tries to make  $R$  indifferent at  $s = R, L$ , then  $L$  will no longer stage coups at this signal as  $L$ 's outside option is better than  $R$ 's. This implies that the expected pay-off for the  $L$  follower from supporting a coup is lower than in the case where both types always stage a coup.

Knowing that  $L$  followers will never support a coup and  $R$  followers will support any coup, I derive the optimal strategy for the leaders. I focus on the  $R$  leader first. Write  $U_i(a, I_i, s, Q_g)$  and  $U_f(b, I_f, I_i, Q_g|a = 1) = U_f(b, I_f, t, Q_g)$ . The optimal strategy of the follower is described by:

- $E[U_i(1, R, L, -1)] > U_i(0, R, L, -1) \Leftrightarrow \sigma < \frac{(1-\beta)(\phi+1)}{\beta P + (1-\beta)(\phi+1)} \equiv \tilde{\sigma}_L(P)$
- $E[U_i(1, R, R, -1)] > U_i(0, R, R, -1) \Leftrightarrow \sigma > \frac{\beta P}{\beta P + (1-\beta)(\phi+1)} \equiv \tilde{\sigma}_R(P)$
- $E[U_i(1, R, L, 1)] > U_i(0, R, L, 1) \Leftrightarrow \sigma > \frac{(1-\beta)(\phi-1)}{\beta P + (1-\beta)(\phi-1)} \equiv \bar{\sigma}_L(P)$
- $E[U_i(1, R, R, 1)] > U_{i,R}(0, R, R, 1) \Leftrightarrow \sigma > \frac{\beta P}{\beta P + (1-\beta)(\phi-1)} \equiv \bar{\sigma}_R(P)$

Define  $\underline{P} \equiv \frac{(1-\beta)\phi - (1-\beta)}{\beta}$ ,  $\bar{P} \equiv \frac{(1-\beta)\phi + (1-\beta)}{\beta}$  and  $\hat{P} \equiv \frac{1}{\beta}(1-\beta)\sqrt{\phi^2 - 1}$  if  $\phi > 1$ ,  $\hat{P} \equiv 0$  if  $\phi < 1$ .

It can be shown that  $\underline{P} < \hat{P} < \bar{P}$  for  $\phi > 1$ . The following results can be derived:

- $P < \underline{P} \Rightarrow \tilde{\sigma}_R < \bar{\sigma}_R < \frac{1}{2} < \bar{\sigma}_L < \tilde{\sigma}_L$
- $P > \bar{P} \Rightarrow \bar{\sigma}_L < \tilde{\sigma}_L < \frac{1}{2} < \tilde{\sigma}_R < \bar{\sigma}_R$
- $\underline{P} < P < \hat{P} \Rightarrow \bar{\sigma}_L < \tilde{\sigma}_R < \frac{1}{2} < \tilde{\sigma}_L < \bar{\sigma}_R$
- $\hat{P} < P < \bar{P} > P^2 \Rightarrow \tilde{\sigma}_R < \bar{\sigma}_L < \frac{1}{2} < \bar{\sigma}_R < \tilde{\sigma}_L$ .

Similar thresholds can be derived for the  $L$  leader, for the case in which the  $L$  follower does not support any coup attempt:

- $E[U_i(1, L, L, -1)] > U_i(0, L, L, -1) \Leftrightarrow \sigma < \frac{(1-\beta)}{\beta P + (1-\beta)} \equiv \hat{\sigma}_L(P)$
- $E[U_i(1, L, R, -1)] > U_i(0, L, R, -1) \Leftrightarrow \sigma > \frac{\beta P}{\beta P + (1-\beta)} \equiv \hat{\sigma}_R(P)$

Define  $\hat{P} = \frac{(1-\beta)}{\beta}$ , it can now be shown that:

- $P < \hat{P} \Rightarrow \hat{\sigma}_R < \frac{1}{2} < \hat{\sigma}_L$
- $P > \hat{P} \Rightarrow \hat{\sigma}_L < \frac{1}{2} < \hat{\sigma}_R$

A number of results restricting the set of possible parameter combinations can be derived by comparing the relevant expressions:

- $\bar{P} > \hat{P}, \forall \phi$
- $\hat{\sigma}_L < \bar{\sigma}_L \Leftrightarrow \phi > 2, \forall P > 0$
- $\hat{\sigma}_L < \tilde{\sigma}_L, \forall \phi, P > 0$
- $\hat{\sigma}_R > \bar{\sigma}_R \Leftrightarrow \phi > 2, \forall P$

- $\hat{\sigma}_R > \tilde{\sigma}_L \Leftrightarrow P > \frac{1}{\beta} (1 - \beta) \sqrt{\phi + 1} \equiv \hat{P}$
- $\hat{\sigma}_R > \bar{\sigma}_L \Leftrightarrow P > \text{real}(\frac{1}{\beta} (1 - \beta) \sqrt{\phi - 1}, 0) \equiv \hat{\bar{P}}$
- $\hat{P} < \hat{\bar{P}} \Leftrightarrow \phi > 2$

I will now derive the optimal strategies for each player in all parameter ranges for  $\max\{2, \frac{1}{1-\alpha}\} < \phi$ .<sup>28</sup> Using the parameter restrictions derived above, it can be shown that this parameter range has:  $\hat{P} < \hat{\bar{P}} < \hat{\bar{P}}, \mathbb{P} < \hat{P} < \bar{P}$ . We now have ten relevant equilibria:

1.  $P < \hat{P}$  and  $\sigma < \bar{\sigma}_L < \tilde{\sigma}_L$  :

$L$  always stages a coup iff incumbent is bad.  $R$  always stages a coup. (A)

2.  $P < \hat{\bar{P}}$  and  $\max(\hat{\sigma}_L, \hat{\sigma}_R) < \sigma < \bar{\sigma}_L < \tilde{\sigma}_L$ :

$L$  always stages a coup iff incumbent is bad and  $s = R$ .  $R$  always stages a coup. (A\*)

3.  $\hat{P} < P < \mathbb{P}$ ,  $\sigma < \min(\bar{\sigma}_L, \hat{\sigma}_R)$  :

$L$  never stages a coup.  $R$  always stages a coup. (A\*\*)

4.  $P < \hat{\bar{P}}$  and  $\bar{\sigma}_L < \sigma < \tilde{\sigma}_L$ :

$L$  always stages a coup iff incumbent is bad and  $s = R$ .  $R$  stages a coup if incumbent is bad or if  $s = R$ . (B\*)

5.  $\hat{\bar{P}} < P < \hat{P}$ ,  $\max(\bar{\sigma}_L, \bar{\sigma}_R) < \sigma < \min(\hat{\sigma}_R, \tilde{\sigma}_L)$ :

$L$  never stages a coup,  $R$  stages a coup iff incumbent is bad or  $s = R$ . (B\*\*)

6.  $\mathbb{P} < P < \bar{P}$ ,  $\sigma < \min(\tilde{\sigma}_L, \bar{\sigma}_R)$ :

$L$  never stages a coup,  $R$  iff incumbent is bad. (C\*\*)

7.  $\sigma > \max\{\tilde{\sigma}_L, \hat{\sigma}_R\}, \forall P$

$L$  stages a coup if the government is bad and  $s = R$ .  $R$  stages a coup iff  $s = R$ . (D\*)

$$E(Q) = \gamma + (1 - \gamma)(-\alpha - \beta(1 - \alpha))$$

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<sup>28</sup>I do not consider the parameter range  $\frac{1}{1-\alpha} < \phi < 2$  in the main section. This range  $\mathbb{P} < \hat{P} < \hat{\bar{P}}$ . Perfect accountability is no longer achievable.  $\frac{1}{1-\alpha} < \phi$  implies that there can be no equilibrium in which the  $L$  follower supports a coup attempt. The optimum will have both  $R$  and  $L$  leaders staging coups if and only if the government is bad. This requires  $\mathbb{P} < P < \hat{P}$  and  $\sigma < \min\{\hat{\sigma}_L, \bar{\sigma}_R, \tilde{\sigma}_L\}$ . The last result rules out the following parameter range:  $\hat{\sigma}_R < \tilde{\sigma}_L < \bar{\sigma}_R$ .

8.  $\hat{P} < P$ ,  $\max(\tilde{\sigma}_L, \bar{\sigma}_R) < \sigma < \hat{\sigma}_R$ :

$L$  never stages a coup,  $R$  stages a coup iff  $s = R$ . ( $D^{**}$ )

9.  $\hat{P} < P$ ,  $\max(\tilde{\sigma}_L, \tilde{\sigma}_R) < \sigma < \bar{\sigma}_R$ :

$L$  never stages a coup,  $R$  stages a coup iff incumbent is bad and  $s = R$ . ( $E^{**}$ )

10.  $\underline{P} < P$ ,  $\sigma < \tilde{\sigma}_R$ :

$L$  and  $R$  never stage a coup. ( $F^{**}$ )

It can be seen easily that the following ranking must hold between these equilibria if we focus on expected government quality  $E(Q)$ :  $A > A^* > A^{**}$ ,  $B^* > B^{**}$ ,  $B^* > D^*$ ,  $C^{**} > B^{**} > D^{**}$ ,  $C^{**} > E^{**} > F^{**}$ .

We can now focus on equilibria ( $A$ ), ( $B^*$ ) and ( $F^{**}$ ):

$$E(Q|A) = \gamma(1 - (1 - \beta)(1 - \alpha)) + (1 - \gamma)(-\beta)$$

$$E(Q|B^*) = \gamma(1 - (1 - \beta)(1 - \alpha)\sigma) + (1 - \gamma)(-\beta - (1 - \beta)\alpha(1 - \sigma))$$

$$\frac{dE(Q|B^*)}{d\sigma} = (1 - \beta)(\alpha - \gamma)$$

$$E(Q|D^*) = \gamma + (1 - \gamma)(-\alpha - \beta(1 - \alpha))$$

Comparing ( $A$ ) and ( $B^*$ ), we find that for  $\sigma = 1$ , both equilibria are equivalent. This is intuitive, as under perfect information coups will only take place if the leader observes that the follower is of type  $R$  and all coups that are attempted will succeed. Therefore, an equilibrium in which  $L$  always stages a coup if the government is bad and  $R$  always stages a coup becomes equivalent in terms of the outcome to an equilibrium in which  $L$  always stages a coup if the government is bad and the followers are  $R$  and the  $R$  leader always stages a coup if the followers are  $R$ . As soon as the precision of the signal becomes weaker in equilibrium ( $B^*$ ), there are two effects. First, the weaker signal decreases the number of coups that the  $R$  leader attempts against the good government. On the other hand, the weaker signal also decreases the number coups that the  $L$  leader stages against the bad government. If it is optimal in equilibrium ( $B^*$ ) to have low signal precision (because  $\frac{dE(Q)}{d\sigma} < 0$ ), then we can look at the extreme case of  $\sigma = \frac{1}{2}$ , even though it is inconsistent with this equilibrium. It can be verified that equilibrium ( $C^{**}$ ) is preferred to the hypothetical equilibrium ( $B^*$ ) with  $\sigma = \frac{1}{2}$  if and only if  $\gamma > \alpha$ . As a consequence, the same will hold for the best possible equilibrium ( $B^*$ ). It can now be derived that:

- $(B^*) > (A) \iff \alpha < \gamma$

- $(C^{**}) > (A) \iff \alpha < \gamma$

- $(C^{**}) > (B^*) \iff \alpha < \gamma$

This implies that either  $(C^{**})$  or  $(A)$  are optimal.  $(C^{**})$  is optimal for  $\gamma > \alpha$ ,  $(A)$  is optimal for  $\alpha > \gamma$ .

**Proof of proposition 7**

First consider  $\phi < \frac{1}{1-\alpha}$ . It follows from the analysis in the main text that pure strategy equilibria can only take the form of pooling equilibria, in which  $\hat{I}_i(R) = \hat{I}_i(L) = \omega$  where  $\omega \in \{L, R, N\}$  and appropriate out-of-equilibrium beliefs are specified. Of these equilibria,  $\omega = R$  fails to meet the intuitive criterion (Cho, Kreps, 1987). Suppose we have an equilibrium with  $\hat{I}_i(R) = \hat{I}_i(L) = R$ , supported by the out-of-equilibrium belief of the  $L$  follower  $\Pr(I_i = L | \hat{I}_i = L) = 0$ . Then  $L$  receives a strictly higher utility from announcing  $L$  if the belief would be  $\Pr(I_i = L | \hat{I}_i = L) = 1$ , as  $L$  does no longer pay cost  $\xi$ .  $R$  would not receive higher utility from announcing  $L$  under the same belief  $\Pr(I_i = L | \hat{I}_i = L) = 1$ , as his coup attempt is supported anyway in the original equilibrium and he has to pay a cost  $\xi$  for lying. Now consider  $\phi > \frac{1}{1-\alpha}$ . In this parameter range, it is never optimal for the  $L$  follower to support a coup attempt against a bad leader if both  $L$  and  $R$  types stage such coups in equilibrium. Suppose we have an equilibrium with  $\hat{I}_i(R) = \hat{I}_i(L) = R$ . Then  $L$  can save  $\xi$  by deviating to announcing  $L$ . The out-of-equilibrium beliefs of the  $L$  follower cannot prevent  $L$  from taking such an action, as the  $L$  follower does not support a coup against the bad leader in equilibrium. The same holds for  $R$  in an equilibrium where  $\hat{I}_i(R) = \hat{I}_i(L) = L$ . Therefore, the only pure strategy pooling equilibrium has  $\hat{I}_i(R) = \hat{I}_i(L) = N$ . Finally, the equilibria described in proposition 7 need to be supported by appropriate out-of-equilibrium beliefs. The belief that the probability of the deviator being  $L$  is  $a$  supports all equilibria.