

# Rooted in Repression: A Theory of Propaganda

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## Abstract

Are propaganda and repression substitutes or complements? We examine this question using a formal model. It builds upon two premises. First, repressive agents have private interests affecting their intimidation and repression efforts. Second, with a focus on propaganda as competence claims, autocrats can shape government competence via its composition. Two forms of propaganda emerge endogenously from our setup, depending on the stakes of repressive agents in an autocrat's political survival. Repressive agents with high stakes signal strong resolve to suppress any rebellion through significant intimidation efforts. It induces citizens to obey while competence claims lack credibility—a form of propaganda called domination. In contrast, autocrats must resort to persuasion—credible competence claims—if intimidation is absent due to low stakes of repressive agents. Our framework clarifies the conditions under which domination and persuasion each substitute or complement repression. We also show how propaganda operates when talk is cheap.

**Keywords:** Autocratic Politics, Cheap Talk, Propaganda, Repression, Transparent Motives.

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In the late 1980s, oil prices collapsed, plunging Gabon's oil-dependent economy into recession and President Omar Bongo into political turmoil. His government responded with salary cuts for state employees. Protests and riots revealed widespread dissatisfaction (Gardinier 1994). In 1990, the army joined general strikes (Burchard and Gregerson 2012). Its stakes in his survival were low. In response, Bongo—rhetorically—championed democratic principles, liberalized Gabon's political landscape, and replaced 35 ministers who had “little real competence” (Gardinier 1994, 28). A few months later, his *Gabonese Democratic Party* (PDG) won a parliamentary majority.

Neighboring Equatorial Guinea in that period also faced pressure for liberalization. The International Monetary Fund (IMF) conditioned financial support on democratic improvements. But President Teodoro Obiang Nguema's lipservice to fundamental rights did not arrest further atrocities by repressive agents whose stakes in his regime were high (Sá and Sanches 2021). Nguema, in turn, was portrayed as the only competent leader. Official accounts entered 98% and 70% of the vote for him and his *Democratic Party of Equatorial Guinea* (PDGE), respectively, in the first multiparty elections. No public outcry followed despite widespread dissatisfaction with the regime.

Repression and propaganda shape up differently in these two accounts. Bongo posed as though he was a democrat at heart and committed to competence in government. Most prominently, he replaced Prime Minister Léon Mébiame, a longtime ally, with regime outsider Casimir Oyé-Mba, a renowned technocrat with economic expertise. Police efforts to contain the protests in Gabon were half-hearted at best. In Equatorial Guinea, Nguema's competence claims were taken to extremes, hailing him as “the country's God” (BBC Africa 2003). His cabinet was full of acolytes. Any sign of dissent sparked off atrocities by his repressive agents (Sá and Sanches 2021).

Are propaganda and repression substitutes or complements? Our theoretical framework explains why autocrats propagate non-credible competence amid repression—as in Equatorial Guinea—but more credible competence absent repression—as in Gabon.

It builds upon two fundamental premises. First, repressive agents have private

interests. These may or may not align with an autocrat's (Policzer 2009). Specifically, they decide on their repression efforts. As for repression tasks, we mainly follow Dragu and Lupu's (2021) distinction between "preventive" and "reactive repression." For ease of exposition and minor conceptual differences, we prefer the terminology of *intimidation* and *repression*. Repression means reactive repression—violent crackdowns on mass protests.<sup>1</sup> Intimidation does comprise preventive repression.<sup>2</sup> Our emphasis is on its visibility, though. We also include regular military parades, heavy police patrols, assaults, raids, recruitment sweeps, or forced mobilization for pro-regime rallies.

Second, we focus on propaganda as competence claims (Yu 2021). Its competence in running the economy, improving living standards, or combating crime depends on a regime's composition of government. Autocrats, like other political leaders, strategically assign portfolios to shape government competence.<sup>3</sup>

This second premise builds upon conspicuous empirical patterns (Bokobza and Nystrup 2024). Autocrats frequently invite outsiders into government—at least in electoral autocracies, such as Gabon from 1990.<sup>4</sup> Figure 1 plots two indicators of the compositions of government across closed autocracies, electoral autocracies, and democracies. The share of cabinet members not affiliated with an autocrat's political party has strictly increased across electoral autocracies since the 1970s (Panel 1a), notably after the Cold War ended. Electoral autocracies are nowadays on par with democracies in

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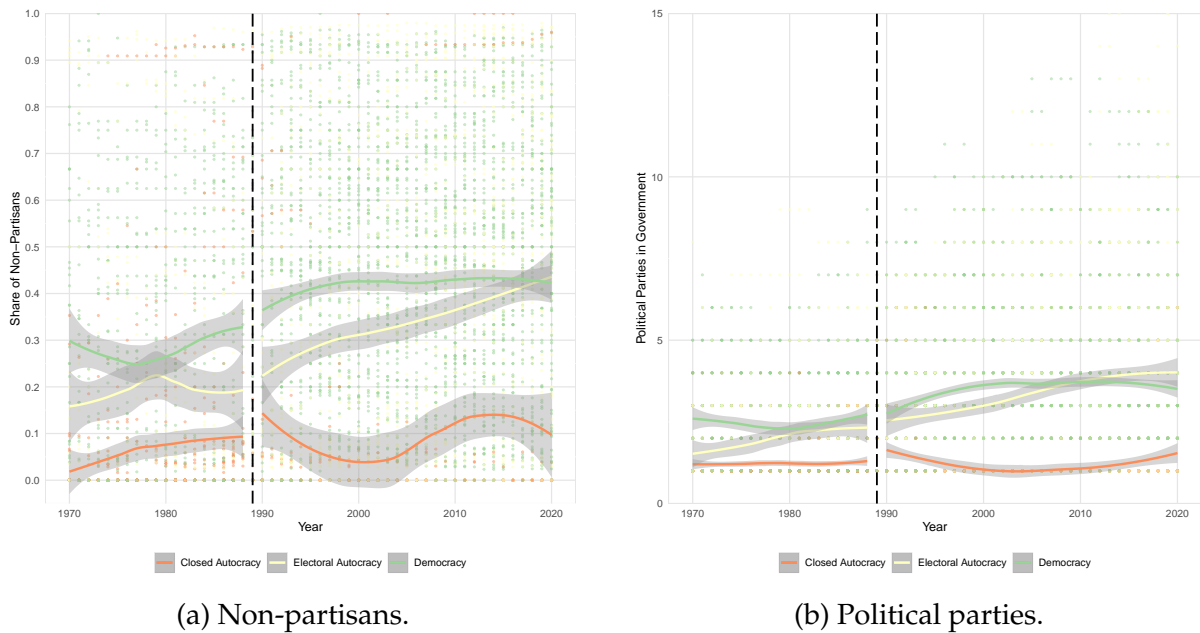
<sup>1</sup> See Ritter (2014), Dragu and Lupu (2018), or Chau, Hassan, and Little (2025).

<sup>2</sup> Preventive repression is "the set of activities governments use to reduce the risk that opposition groups threaten governments' power" (Dragu and Lupu 2021, 992).

<sup>3</sup> Even personalist rulers delegate implementation tasks (Svolik 2012).

<sup>4</sup> Electoral autocracies feature "legal multiparty competition for the legislature" (Miller 2015, 1529).

Figure 1: Inclusiveness of governments across regimes, 1970-2020.



*Note:* The share of non-partisans and the number of political parties in government are calculated based on Nyrup and Bramwell’s (2020) *WhoGov* data. The latter indicator treats independent members of the executive as though they form a political party. Democracies are distinguished from autocracies using Boix, Miller, and Rosato’s (2013) definition. Autocracies with a value of two or higher on V-Dem’s (2024) ordinal measure of electoral multipartyism are considered an *electoral autocracy*. Otherwise, an autocracy is labeled as *closed autocracy*. Trends are locally estimated and smoothed using 95% confidence intervals. Dotted vertical lines mark the Fall of the Berlin Wall in 1989.

this regard (above 40 percent). In the process, they have slightly surpassed democracies in terms of the average number of political parties in government (Panel 1b).

These premises warrant a formal model with three players. An *autocrat (he)* sends propaganda signals.<sup>5</sup> These signals capture his *cheap talk* about the most competent composition of government. Ideally, he wants citizens to believe a government full of regime insiders be in their best interest. Alternatively, he invites regime outsiders to join his government and proclaims their additions as improvements in government competence.<sup>6</sup> An autocrat does have “transparent motives” (Lipnowski and Ravid 2020) while incurring no cost in spinning competence claims. His payoffs purely de-

<sup>5</sup> The autocrat captures the leader atop an autocracy and his inner circle.

<sup>6</sup> Miller (2015) shows that citizens do fare better in electoral than closed autocracies.

pend on the actions of others who consume them. Specifically, a representative *citizen* (*they*) decides upon his signals whether to defy or support his proposed government.

We add a *repressive agent* (*she*) as third player. The repressive agent moves first and makes intimidation efforts. Intimidation is publicly observable. Moreover, the repressive agent might make repression efforts, but only if the citizen does defy. Hence, the citizen faces uncertainty over personal repercussions from rebellion.

Our argument is *not* about elite cooptation.<sup>7</sup> Ours is an informational model. It explains citizens' acquiescence to elite bargains amid widespread dissatisfaction with the regime. In fact, it addresses a major weakness in theories of elite cooptation: bedfellowship with the regime can compromise an outsider's credibility. Plus, accessed state resources rarely trickle down to voters in meaningful ways (Murunga 2002; Szakonyi 2025). This questions a common assumption used to resolve the credibility issue. It is thus not obvious why autocrats should garner the support from disenfranchised voters. We demonstrate how autocrats might spin cooptation of outsiders as improvements in government competence to persuade voters.

Our framework gives endogenous rise to two forms of propaganda. The first form is reminiscent of Gabon from 1990: *persuasion*. Persuasion is a communication strategy that conveys genuine information about the competence of an autocrat's government. His competence claims gain credibility from potential admissions that inviting regime outsiders into government better serves citizen interests. It corroborates a prominent insight: persuasion requires acknowledgment of shortcomings (Gehlbach and Sonin 2014). In contrast, *domination*, the second form, holds no information about an autocrat's competence. His claims bear no credibility, as in Equatorial Guinea.

We show that the form of propaganda depends on the stakes of repressive agents in an autocrat's survival.<sup>8</sup> High stakes induce repressive agents to intimidate citizens.

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<sup>7</sup> Meng, Paine, and Powell (2023) review elite cooptation and power sharing. Woldense and Kroeger (2024) examine cooptation via cabinet posts empirically.

<sup>8</sup> Our conception as stakes is deliberately broad to cover diverse motivations for re-

Table 1: Propaganda and repression.

		<b>Propaganda</b>	
		<i>Persuasion</i>	<i>Domination</i>
<b>Repression in the literature</b>	<i>Intimidation</i>	Substitute	Complement
	<i>Repression</i>	Substitute & complement	Substitute

Upon intimidation, autocrats anticipate their fear and burst into absurdity. They dominate. Domination does not deceive but terrify people into obedience (Huang 2015; Wedeen 1999). Repressive agents with low stakes lack incentives to intimidate. In response, autocrats must resort to persuasion to avoid a rebellion.

Our key contribution is a comprehensive examination of propaganda’s relationship with repression. Table 1 summarizes our results. Whenever propaganda fails, repression is a last resort. As for persuasion, however, a bigger shadow of repression multiplies the probability that an autocrat deceives ordinary people. Hence, repression and persuasion are substitutes and complements at the same time. In contrast, persuasion and intimidation are substitutes. Absent intimidation, autocrats must persuade. Autocrats see no need to persuade citizens of their competence when repressive agents do intimidate them into obedience. On the contrary, intimidation induces autocrats to make absurd claims. In this sense, domination and intimidation are complements.

We demonstrate our model’s consistency with empirical patterns in Equatorial Guinea, Gabon, Angola, and the Republic of Congo after the Cold War.

Repressive agents, such as ethnic favoritism (Quinlivan 1999), posttransition fates (Paine 2022), military corporate interests (Cook 2007), ideology (Bueno de Mesquita and Shadmehr 2023), or mundane career motivations (Scharpf and Gläsel 2020).

# 1 Contributions

We clarify propaganda's relationship with repression, demonstrate how autocrats can persuade absent commitments, and highlight agency problems in propaganda. As mentioned above, we also complement the literature on elite bargains.

## 1.1 Roots of Propaganda

Propaganda is rooted in repression for three reasons. First, repression is always a last resort. Its scope depends on the stakes of repressive agents in an autocrat's survival. Second, this shadow of repression can enable them to intimidate citizens into obedience. Higher stakes strengthen their resolve to crack down on protests. Intimidation is thus a costly signal. It is to discourage citizens from contentious action that would inflict upon repressive agents higher repression costs down the line. Third, intimidation breeds both obedience and absurdity. Absent intimidation, autocrats must persuade.

Few other studies jointly investigate propaganda and repression.<sup>9</sup> Guriev and Treisman (2020, 2022) suggest propaganda and repression are substitutes: some autocrats rely on fear, others on spin. Gitmez and Sonin (2023) suggest they are complements: elimination of a regime's ardent adversaries leaves moderate segments of society more vulnerable to propaganda. Gehlbach et al. (2025) suggest the ease of building a repressive apparatus determines propaganda's relationship with repression.

We shift focus to the private incentives of repressive agents. We distinguish repression from intimidation. We integrate domination to broaden the scope beyond persuasion. Our results in Table 1 suggest that propaganda's relationship with repression is more complex than previously acknowledged. We defy the convention that autocrats prefer deception over force (Guriev and Treisman 2022), suggesting the opposite. Au-

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<sup>9</sup> Huang (2015), Egorov and Sonin (2021), and Carter and Carter (2023) impose assumptions on how repressive capacities translate into communication strategies.

ocrats must persuade when repressive agents lack resolve to suppress dissent.

Carter and Carter (2023) also develop a unified framework of propaganda. They emphasize electoral constraints: if constrained, autocrats must persuade. If not, they dominate. In our model, forms of propaganda emerge endogenously from private incentives of repressive agents. Carter and Carter (2023) simply equate weak electoral constraints with high repressive capacities.

## 1.2 Persuasion without Commitment

We interpret propaganda as cheap talk. A novelty for informational mechanisms is that we treat inclusion of regime outsiders as a strategy, not a symptom. Our framework thus applies more directly to the comportment of autocrats (Guriev and Treisman 2022; Matovski 2021). It also enables autocrats to persuade without commitment. This is important because it widens the scope of persuasion beyond the reach of conventional commitment frameworks (Gehlbach and Sonin 2014; Gehlbach et al. 2025). Wherever feasible, however, autocrats weakly benefit from commitments (Lipnowski and Ravid 2020), especially when lies are harder to detect (Luo and Rozenas 2025).

## 1.3 Agency Problems

Our framework contributes to a vast literature on agency problems in autocratic politics (Egorov and Sonin 2011; Rundlett and Svolik 2016; Svolik 2012; Tyson 2018). It suggests that private incentives for repressive agents determine an autocrat's propaganda choice. The agency problem that emerges is a variant of the *posttransition fate* that Paine (2022) identifies as a source of disloyalty among repressive agents. Repressive agents might limit costly repression efforts because their stakes in an autocrat's survival are low and they have outside options. For the same reason, they eschew costly intimidation work altogether. Persuasion then becomes an autocrat's resort strategy. If persuasion fails, he must hope that limited repression efforts are still enough.

## 2 Formal Model

Our model comprises three players: *autocrat A* (male pronouns), his *repressive agent R* (female pronouns), and *citizen C* (plural pronouns).

At the beginning, Nature draws the true values of two sets of parameters. First, Nature draws the repressive agent's *stakes  $v$  in the autocrat's survival*. Her stakes have support on the unit interval,  $v \in [0, 1]$ , and are drawn from a strictly positive, continuous, and single-peaked probability density function  $v \sim f(t)$  with cumulative distribution function  $F(t)$ . From the repressive agent's point of view, parameter  $v$  captures the autocrat's valence advantage over a non-strategic challenger. Her stakes are the repressive agent's private knowledge. All players share common prior  $\mathbb{E}[v] = \bar{v}$ .

Second, Nature draws from a uniform distribution the competence level of each potential composition of government. The government consists of one non-strategic minister. An autocrat's ideal government features a regime insider and has competence  $\theta_1 \sim \mathcal{U}[0, 1]$ . The minister of each other potential government  $i \in \{1, \dots, n - 1\}$  is a regime outsider with competence  $\theta_{x_i} \sim \mathcal{U}[0, 1]$  (subscripts  $x_i$  and 1 become apparent below). To keep the model tractable, we assume that competence levels are mutually independent draws (*i.i.d.*). The autocrat's ideal government is parameterized as the  $n^{\text{th}}$  government. The set of all possible governments with the autocrat at its helm is thus  $N = \{i : 1, \dots, n - 1, n\}$ . Only the autocrat knows the true competence of each potential government. All players share exchangeable prior  $\mu_0 \in [0, 1]^n$ .

The rest of our game has four stages: intimidation stage, information stage, selection stage, and repression stage. Throughout these stages, the autocrat, the repressive agent, and the citizen make various decisions. These are discussed next.

### 2.1 Intimidation Stage

The repressive agent privately observes her stakes in the autocrat's survival and sets *intimidation effort*  $\epsilon \in [0, 1]$ . She finds intimidation costly. Specifically, intimidation

costs  $c(\cdot)$  are strictly increasing in intimidation effort  $\epsilon$ ,  $\partial c(\epsilon)/\partial \epsilon > 0$ , where  $c(0) = 0$ . Intimidation efforts are publicly observed by the autocrat and the citizen.

## 2.2 Information Stage

The autocrat privately observes each potential government's competence, and intimidation effort  $\epsilon$ . He then sends public message  $m \in \mathcal{M}$ , where  $\mathcal{M}$  is the entire message space. This message space is assumed compact, metrizable, and sufficiently rich (Lipnowski and Ravid 2020). His messages are cheap talk. They incur no costs. His payoffs only depend on the citizen's action and his repressive agent's incentives to repress.

## 2.3 Selection Stage

The citizen chooses between multiple options. If they support the non-strategic challenger,  $\sigma = 0$ , the game proceeds to the repression stage. Otherwise, the game ends at the selection stage. Their support for an autocrat's ideal government or any other government  $i \in \{1, \dots, n-1\}$  are denoted by  $\sigma = 1$  and  $\sigma = x_i$ , respectively. Overall, the citizen's choice set is thus  $\sigma \in \Sigma \equiv N \cup \{0\}$ .

## 2.4 Repression Stage

If the game proceeds to the repression stage, the repressive agent makes *repression effort*  $\zeta \in [0, 1]$ . Otherwise, her repression effort is  $\zeta = 0$ . She finds repression costly. We operationalize repression costs using the conventional cost function  $k(\zeta) \equiv (1/2)\zeta^2$ . Repression has two effects. First, repression efforts determine the probability that the autocrat remains in power. In other words, the citizen's rebellion fails with probability  $\zeta$ . If so, the autocrat forms his ideal government. Second, repression efforts also determine the citizen's personal repercussions from defying the autocrat (protest costs).

Table 2: Summary of choice variables and parameters.

<b>Choice Variables</b>	
$\epsilon \in [0, 1]$	Intimidation effort (repressive agent)
$\zeta \in [0, 1]$	Repression effort (repressive agent)
$m \in \mathcal{M}$	Message about competence levels (autocrat)
$\sigma \in \{0, x_1, \dots, x_{n-1}, 1\}$	Support for challenger or any government $i$ (citizen)
<b>Parameters</b>	
$\theta_i \sim \Theta \in [0, 1]^n$	Competence of government $i \in \{1, \dots, n\}$
$\mu_0 \in \Delta\Theta$	Expected competence (exchangeable prior)
$v \in [0, 1]$	Repressive agent's stakes in the autocrat's survival
$x_i \in (0, 1)$	Autocrat's power under government $i \in N \cap \{0\}$
$b \in (0, 1)$	Non-strategic challenger's competence, $\mu_0 < b$

## 2.5 Payoffs

The autocrat has transparent motives. He achieves his best payoff normalized to 1 if the citizen supports his ideal government. Their support for any other government  $i \in N \setminus n$  keeps the autocrat in power but only gets him a payoff of  $x_i \in (0, 1)$ . He must concede share  $(1 - x_i)$  of political power to a coopted outsider.<sup>10</sup> For notational ease and without loss of generality, we define  $x_i = i/n$ , implying citizen's choice  $\sigma = x_i = i/n$  for each government  $i \in N \cap \{0\}$ . The set of potential governments is thus ordered from the autocrat's least to most preferred,  $0 < x_1 < x_2 < \dots < x_{n-1} < 1$ .

In any case, the autocrat wants to avoid a successful rebellion. A rebellion replaces him with a non-strategic challenger. Its probability to succeed is conditional on his agent's repression efforts. If ousted, the autocrat gets his worst payoff normalized to 0. If a rebellion fails, he forms his ideal government by assumption. His payoff is thus

$$U_A = \sigma + [1 - \sigma - \mathbf{1}_{\{\sigma=x_i\}}(\mathbf{1}_{\{\sigma \neq 0\}} - x_i)]\zeta,$$

<sup>10</sup> We take parameter  $x_i$  as given. See Spaniel (2024) for bargaining models.

where  $\mathbf{1}_{\{\sigma=x_i\}}$  is an indicator function equal to 1 if the citizen chooses government  $i$ , and 0 otherwise. Similarly, indicator function  $\mathbf{1}_{\{\sigma \neq 0\}}$  equals 1, unless the citizen rebels.

Government competence mostly determines the citizen's payoff. Should they defy the autocrat, the citizen faces *personal repercussions* endogenous to repression efforts. If their rebellion succeeds, the citizen gains benefit  $b \in (0, 1)$ . If it fails, their benefit from the autocrat's continued rule is normalized to 0 to keep the model simple:

$$U_C = \theta_\sigma + [1 - \sigma - \mathbf{1}_{\{\sigma=x_i\}}(\mathbf{1}_{\{\sigma \neq 0\}} - x_i)][(1 - \zeta)b - \zeta],$$

where  $\theta_0 = 0$ .

The repressive agent purely cares about her stakes in the autocrat's survival. To promote it, she can intimidate or repress but finds both these efforts costly:

$$U_R = \mathbf{1}_{\{\sigma \neq 0\}}v + (1 - \mathbf{1}_{\{\sigma \neq 0\}})[\zeta v - (1/2)\zeta^2] - c(\epsilon).$$

Table 2 summarizes the choice variables and parameters.

## 2.6 Strategies and Equilibrium

We solve for perfect Bayesian equilibria. Both the autocrat and the citizen form beliefs about the repressive agent's stakes, and thus repression efforts, by observing her intimidation efforts,  $\tau : [0, 1] \rightarrow [0, 1] \rightarrow [0, 1]$ . Upon the autocrat's message, the repressive agent and the citizen also form beliefs about each government's competence  $\pi : \mathcal{M} \rightarrow [0, 1]^n \in \Theta$ . The autocrat's messaging strategy is a mapping from competence levels and his beliefs about the repressive agent's stakes in his survival onto the message space,  $m : [0, 1]^n \times [0, 1] \rightarrow \Delta\mathcal{M}$ . The repressive agent maps his stakes in the autocrat's survival onto her intimidation and repression efforts,  $\epsilon, \zeta : [0, 1] \rightarrow [0, 1] \times [0, 1]$ . Finally, the citizen's strategy maps their beliefs about each government's competence and the repressive agent's stakes onto their action,  $\sigma : \mathcal{M} \times [0, 1] \rightarrow \Delta\Sigma$ .

## 2.7 Assumptions

We study propaganda's relationship with repression, thus imposing two assumptions:

**Assumption 1.** *Absent public information, the citizen prefers the non-strategic challenger over any government  $i$ ,  $\mu_0 < b$ .*

**Assumption 2.** *The citizen is not deterred absent public information.*

Assumptions 1 and 2 jointly ensure the citizen defies the autocrat absent public information on both government competence and personal repercussions from a revolt. In a first step, we derive the formal condition behind Assumption 2. It clarifies that this is effectively a statement about the prior beliefs on the repressive agent's stakes.

We also make a technical assumption linking intimidation to repression.

**Assumption 3.** *Intimidation cost function  $c(t)$  is a composition  $c(t) = g(t) \circ k(t)$ . Transformation function  $g(\cdot)$  ensures that  $c(t) \leq k(t)$  and  $\partial c(t)/\partial t > 0$  for all  $t \in [0, 1]$ .*

Assumption 3 has two purposes. First, it ensures a unique mapping from repression onto intimidation efforts,  $\zeta \leftarrow \epsilon$ . In principle, this permits inferences on the scope of repression from observed intimidation. Second, it states that, for a given value  $t$ , intimidation costs are lower than repression costs. This is a natural assumption to make. Repressive agents would lack incentives to ever intimidate otherwise. Nor should threats to use physical violence ever be more costly than its actual execution.

## 3 Comments on the Model

We distinguish invited outsiders from non-strategic challengers. The latter are charismatic opponents. Alexei Navalny was a prominent example in Russia. Vladimir Putin even avoided mentioning his name in order not to legitimize his cause (Guriev and Treisman 2022, 81). In contrast, autocrats often invite less charismatic, less principled outsiders. The tradeoff between loyalty (or lacking popularity) and competence is implicitly captured by the autocrat's power parameter in our framework.

The citizen selects the government. Minor reframing would allow us to interpret their choice as to set an autocrat’s popular support, upon which a government is formed. We prefer our framing for three reasons. First, either way, the citizen’s choice effectively boils down to either accepting or defying a proposed government. Yet, support levels would require additional assumptions on how they map onto collective action. Second, support levels seem too focused on electoral results. The precise figures are usually less relevant for autocrats and often massaged anyway. Third, our scope is thus broader than that of support levels. These points also justify why the autocrat’s choice is conceptualized as a message, not a commitment.

For tractability, expected competence levels are independent draws. Substantively, this is a valid assumption at least in contexts with no institutionalized party system and high volatility in political opponents. It thus covers a large share of autocracies.

For tractability, too, the nature of government does not matter for the repressive agent, unless she faces a challenger’s rule. At the very least, this assumption is justifiable whenever cooptation does not affect organizational affairs of security agencies.

## 4 Incentives for Repression

The repressive agent considers repression efforts if and only if the the citizen defies. At that point, any intimidation costs incurred earlier are sunk. If she does not repress, she gets a net payoff of 0. Repression efforts increase the odds that the autocrat remains in power. They are costly, though. The repressive agent’s optimization problem is thus

$$\max_{\zeta \in [0,1]} \underbrace{\zeta v}_{\text{Autocrat's survival}} - \underbrace{(1/2)\zeta^2}_{\text{Repression costs}}.$$

The first derivative suggests that her optimal repression efforts are

$$\zeta^* = v. \tag{1}$$

Repression strictly increases in a repressive agent's stakes. The more an autocrat's rule benefits repressive agents, the more invested they are in protecting his regime.

## 5 Deterrence Condition

The citizen understands that the repressive agent's stakes in regime survival drive repression. The citizen faces uncertainty over her stakes. Yet, they may experience intimidation, which they understand is correlated with repression. Intimidation might thus inform the citizen's beliefs about the scope of repression.

Consider the citizen's expected payoffs. If they support a government with the autocrat at its helm, the citizen comes to no harm. Given the autocrat's message  $m$ , the citizen expects a payoff of  $\mathbb{E}[\theta_\sigma \mid m]$  from any such government. If they support the challenger, the citizen expects a payoff of

$$r(\zeta \mid \hat{e}) \equiv \underbrace{\{1 - \mathbb{E}[\zeta \mid \hat{e}]\}b}_{\text{Benefits from successful revolt}} - \underbrace{\mathbb{E}[\zeta \mid \hat{e}]}_{\text{Personal repercussions}}.$$

The outcome of a rebellion is uncertain. Though, the citizen faces personal repercussions regardless. Both the likelihood that a revolt fails and the citizen's disutility from repression strictly increase in expected repression efforts  $\mathbb{E}[\zeta \mid \hat{e}]$ , where  $\hat{e}$  denotes given intimidation efforts to be determined below.

We can now determine the citizen's incentives for a rebellion. The citizen does

challenge the autocrat—they are *not* deterred—if and only if

$$\underbrace{r(\zeta \mid \hat{\epsilon})}_{\substack{\text{Expected payoffs} \\ \text{from a revolt}}} > \underbrace{\max_{\sigma \in \Sigma \setminus 0} \mathbb{E}[\theta_\sigma \mid m]}_{\substack{\text{Government with highest} \\ \text{expected competence}}} . \quad (2)$$

The citizen aims for the most competent government. An autocrat’s recommendation also competes with expectations on the challenger. If these expectations exceed the highest expected competence of an autocrat-led government, the citizen revolts.

We can rearrange Condition 2 and express it as a *deterrence condition*. Suppose first that either no propaganda signal is sent or the autocrat’s communication is not informative. Either way, the citizen must rely on their prior beliefs. The citizen *a priori* believes that the competence of any government that keeps the autocrat in power is  $\mathbb{E}[\theta_\sigma] = \mu_0$  (for any  $\sigma \in \Sigma \setminus 0$ ) because their priors are exchangeable. Consequently, the right-hand side (RHS) of Condition 2 is simply  $\mu_0$ . Absent new information, the citizen is thus not deterred but rebels if and only if

$$\mathbb{E}[\zeta \mid \hat{\epsilon}] < \frac{b - \mu_0}{b + 1} \equiv \bar{\zeta}. \quad (3)$$

They never revolt if the expected scope of repression meets *deterrence threshold*  $\bar{\zeta}$ .

Lemma 1 ensures that this deterrence threshold is also used when communication is informative. We prove it in the Online Appendix. Its intuition is that, in equilibrium, the citizen’s posterior beliefs differ depending on the autocrat’s messages. It suggests that the citizen’s deterrence threshold, too, differs *a posteriori*. We will see that the citizen assigns higher posterior than prior beliefs to any proposed government because they receive new positive information on it,  $\mathbb{E}[\theta_{\sigma^*} \mid m] > \mu_0$ . Yet, when the citizen is fully deterred, the autocrat proposes his ideal government regardless. His communication ceases to be informative. The citizen must then resort to prior belief  $\mu_0$ , invoking deterrence threshold  $\bar{\zeta}$ . Moreover, this threshold strictly decreases in the citizen’s pos-

terior beliefs (proxied by  $\mu_0$ ),  $\partial \bar{\zeta} / \partial \mu_0 < 0$ . An expected scope of repression that meets deterrence threshold  $\bar{\zeta}$  is thus sufficient for the citizen to acquiesce.

**Lemma 1.** *Deterrence threshold  $\bar{\zeta}$  applies in equilibrium even if communication is informative.*

These insights also hold implications for Assumption 2. To ensure they are not deterred absent intimidation, the citizen's prior beliefs about the scope of repression must be lower than deterrence threshold  $\bar{\zeta}_+$  denoting that one which results from their highest posterior beliefs.<sup>11</sup> We uphold this prior condition in the remainder.

**Corollary 1.** *Assumption 2 requires  $\mathbb{E}[\zeta] < \bar{\zeta}_+$ .*

## 6 Propaganda in the Shadow of Repression

This section focuses on intimidation effects on propaganda. We proceed in two steps. We first ignore intimidation: no new information on the scope of repression materializes. Given Assumption 2, the citizen thus revolts, unless the autocrat persuades them. We then examine our full model with endogenous intimidation. In comparison, these models show that intimidation determines the form of propaganda. If intimidation efforts are low, the autocrat must persuade. If they are high, the autocrat dominates.

### 6.1 No Intimidation

Absent intimidation, the autocrat and the citizen use their prior beliefs about the scope of repression. Assumption 2 enforces that the citizen is not deterred. Persuasion is the autocrat's only option to avoid a revolt. From a revolt, the autocrat can expect a payoff of  $\mathbb{E}[\zeta] = \mathbb{E}[v] = \bar{v}$  given Condition 1. The citizen expects  $r(\zeta | \cdot) = r(\mathbb{E}[\zeta]) = r(\bar{v})$ .

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<sup>11</sup> Its precise value is determined in the Online Appendix.

### 6.1.1 Belief-Based Approach

Our equilibrium analysis uses a belief-based approach (Kamenica and Gentzkow 2011; Lipnowski and Ravid 2020).<sup>12</sup> A belief-based approach puts emphasis on the ex-ante distribution over posterior beliefs,  $p \in \Delta\Delta\Theta$ , and focuses on outcomes. An equilibrium outcome must meet two conditions. The first condition is *Bayes' plausibility*: information policy  $p$  must average to the prior,  $\int \mu dp(\mu) = \mu_0$ . The second condition is *incentive compatibility*. Under cheap talk, incentive compatibility must hold for both the citizen and the autocrat (Lipnowski and Ravid 2020). Incentive compatibility for the autocrat—the sender—usually makes this a hard problem.

In our context, however, we can simplify the incentive compatibility constraints on equilibrium outcomes using Lipnowski and Ravid's (2020, 1638–1639) concept of securability. Securability suggests that we can ignore the autocrat's constraints when focusing on his least favorite message in any given information policy. This is possible thanks to his transparent motives. It *secures* an autocrat some ex-ante payoff  $x_k \geq \bar{v}$ .

### 6.1.2 Key Insight

Cheap talk can be persuasive if interests align. An autocrat benefits from revealing the most competent government if it yields higher payoffs than a rebellion for both him and the citizen. His problem is lack of credibility: set to communicate said government, the autocrat does have incentives to propagate a government that may be less competent but gives himself more power.

The autocrat makes a key strategic move to mitigate this issue. He does not pledge to reveal the most competent of all possible governments but focuses his rhetoric on a subset of possible governments more favorable to him. From among this subset, he promises to reveal the most competent government with some positive probability and proposes any at random otherwise. If he widens this subset enough, the autocrat

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<sup>12</sup> We discuss this approach and securability more formally in the Online Appendix.

secures a minimum share of power that meets his expected power after a revolt.

The key to understanding why this strategy works is the citizen's beliefs. The citizen might support a propagated government despite the fact that the most competent is often not among the potentially proposed. Such deception is possible because the citizen (i) forms expectations on the most competent government among those potentially proposed and (ii) receives new positive information only on the proposed government. We show that the autocrat gains credibility when considering enough alternatives to his ideal government while understating more favorable governments. In Lipnowski and Ravid's (2020) words, the autocrat "reduce[s] the informativeness of profitable messages" (1634). It also means he can safely ignore government compositions that require inordinate power concessions.

### 6.1.3 Securable Payoff

We exploit some statistical properties to determine the autocrat's securable payoff. The most competent government  $i$  is identified by

$$\mathbf{i}_k := \arg \max_{i \in \{k, \dots, n\}} \theta_{x_i}, \quad (4)$$

where rank  $k \in \{1, \dots, n - 1\}$ . Intuitively, the citizen's incentives also require that

$$\mathbb{E} \left[ \max_{i \in \{k, \dots, n\}} \theta_{x_i} - r(\bar{v}) \right] \geq 0. \quad (5)$$

Condition 5 formalizes that the citizen's expected payoffs from the most competent government must be weakly higher than those from a revolt. Priors are exchangeable. Hence, the properties of the uniform distribution determine the highest expected competence among all governments indexed  $k$  or higher,

$$\mathbb{E} \left[ \max_{i \in \{k, \dots, n\}} \theta_{x_i} \right] = \frac{1 + n - k}{2 + n - k}. \quad (6)$$

Substitute Equation 6 into Condition 5 and solve for  $k$ . It yields that the autocrat's securable value is  $x_{k^*}$ , where

$$k^* = \left\lfloor n - \frac{2r(\bar{v}) - 1}{1 - r(\bar{v})} \right\rfloor$$

is the rank of the government associated with it.<sup>13</sup>

#### 6.1.4 Persuasion in Equilibrium

Consider the autocrat's persuasion strategy. He reveals the most competent government among  $k^*$  through  $n$  with probability  $(1 - \rho)$ . With counter probability  $\rho$ , he suggests any government  $i \in \{k^*, \dots, n\}$  at random. The citizen's prior beliefs about the latter is  $\mathbb{E}[\theta_{x_j}] = \mu_0 = 1/2$  because prior  $\mu_0$  is exchangeable. Their payoffs from supporting the autocrat's recommended government must equal their expected revolt payoffs. Hence, the citizen's indifference condition is

$$\underbrace{[1 - \rho] \mathbb{E} \left[ \max_{i \in \{k^*, \dots, n\}} \theta_{x_i} \right]}_{\text{Revelation}} + \underbrace{\rho \mathbb{E}[\theta_{x_j}]}_{\substack{\text{Tampered} \\ \text{recommendation}}} = \underbrace{r(\bar{v})}_{\text{Revolt}}.$$

The autocrat randomizes across all governments indexed  $k^*$  or higher with probability

$$\rho^* = 2 \left\{ 1 - r(\bar{v}) - \frac{2r(\bar{v}) - 1}{n - k^*} \right\} \quad (7)$$

and reveals the (seemingly) most competent with counter probability  $(1 - \rho^*)$ .

The citizen counters the autocrat's credibility issue by revolting with positive probability. The precise probability depends on the autocrat's gains from his recommended

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<sup>13</sup> Government  $k^*$  is the greatest integer less than or equal to the term inside the floor brackets  $\lfloor \cdot \rfloor$ .

government. More precisely, the citizen supports the proposed government with probability  $\eta$ . If so, the autocrat gets a payoff of  $u_A(i)$ . With counter probability  $(1 - \eta)$ , the citizen rebels and the autocrat must expect a payoff of  $\bar{v}$ . Because the citizen expects the most competent government to be indexed  $k^*$  or higher, the autocrat can attain an expected payoff of  $x_{k^*}$  in equilibrium. Thus, the autocrat's indifference condition is

$$\underbrace{\eta u_A(i)}_{\substack{\text{Recommended} \\ \text{government}}} + \underbrace{(1 - \eta)\bar{v}}_{\text{Revolt}} = \underbrace{x_{k^*}}_{\substack{\text{Securable} \\ \text{payoff}}}$$

and the citizen supports the recommended government with probability

$$\eta^* = \frac{x_{k^*} - \bar{v}}{u_A(i) - \bar{v}}. \quad (8)$$

Equation 8 suggests that the citizen supports government  $k^*$  *with certainty* if the autocrat proposes it. Their probability to support a recommended government strictly decreases in the autocrat's share of political power  $u_A(i)$ . Counterintuitively, though, the citizen does support his ideal government with positive probability, if propagated.

**Lemma 2.** *If intimidation is not possible, the autocrat chooses an information policy that secures him a payoff of  $x_{k^*} \geq \bar{v}$ . It entails that he tampers with his recommendation with probability  $\rho^*$ , and reveals the most competent government  $i \in \{k^*, \dots, n\}$  otherwise. The citizen supports his suggested government with probability  $\eta^*$ . Otherwise, they revolt.*

Lemma 2 rectifies a prominent finding on information politics. It has been argued that autocratic governments must enjoy some reputation for competence for persuasion to work (Guriev and Treisman 2020, 2022; Rozenas and Stukal 2019). When talk is cheap, however, autocrats simply talk up governments more to their liking. Citizens are far from certain that the proposed government is the most competent. Still, they are more optimistic about it. At least, it has been mentioned—and in positive ways.

Lemma 2 does confirm that persuasion must be informative. The autocrat must

reveal the most competent government among the potentially proposed with positive probability. Otherwise, he cannot induce citizens to support governments he suggests.

**Corollary 2.** *Persuasion must be informative.*

### 6.1.5 Lack of Persuasion

To make Corollary 2 more obvious, consider a situation where no information policy can induce the citizen to support a recommended government. This can happen if the autocrat actually prefers a revolt over any government that is not his ideal,  $\bar{v} > x_{n-1}$ . His information policy then simply ignores these governments. Even if his ideal government was the most competent, however, he would cease to persuade because he fails to understate. Consequently, the citizen revolts.

**Lemma 3.** *Absent intimidation, if no information policy can secure him a more favorable payoff, the autocrat constantly propagates his ideal government. His propaganda is not informative. The citizen relies on their prior beliefs and revolts.*

The equilibrium play is summarized in Lemma 3. The autocrat lacks leverage to persuade. He must rely on repression to remain in power.

## 6.2 Endogenous Intimidation

In our full model, the autocrat and the citizen do observe intimidation efforts. We show that the repressive agent applies a cutpoint rule to decide whether to intimidate.

### 6.2.1 Purpose of Intimidation

Intimidation has a clear purpose. Repressive agents intimidate—“burn money,” in game-theoretic language—because they seek avoiding more costly repression efforts down the line. Their activities can send a credible threat that induces citizens to obey because citizens understand the link between intimidation and repression.

We recall three facts about the scope of repression. First, the citizen is fully deterred if the expected scope of repression meets deterrence threshold  $\bar{\zeta}$ ,  $\mathbb{E}[\zeta | \hat{e}] \geq \bar{\zeta}$ . Second, Equation 1 states that the scope of repression strictly increases in the repressive agent's stakes. Deterrence threshold  $\bar{\zeta}$  is an intermediate value,  $\bar{\zeta} \in (0, 1)$ . A unique mapping  $\bar{\zeta} \rightarrow \bar{v}$  must exist. Third, Assumption 3 ensures a unique mapping from repression into intimidation efforts. It suggests some intimidation effort  $\epsilon^*$  that barely sets the expected scope of repression equal to deterrence threshold  $\bar{\zeta}$ ,  $\mathbb{E}[\zeta | \epsilon^*] = \bar{\zeta}$ . We show below that, when *intimidation cutpoint*  $\epsilon^*$  exists, it is unique. We also establish that the repressive agent's stakes determine both intimidation and repression,  $\epsilon \leftarrow v \rightarrow \zeta$ , and that intimidation cutpoint  $\epsilon^*$  relates to a unique *stakes cutpoint*  $v^*$ ,  $\epsilon^* \leftarrow v^*$ .

Stakes cutpoint  $v^*$  has straightforward implications for belief formation. Absent intimidation,  $\hat{e} = 0$ , both the autocrat and the citizen believe that the repressive agent's stakes are  $\mathbb{E}[v | \hat{e} = 0] = \int_0^{v^*} tf(t)dt \equiv \bar{v}_0$ . In the opposite case,  $\hat{e} = \epsilon^*$ , they expect  $\mathbb{E}[v | \hat{e} = \epsilon^*] = \int_{v^*}^1 tf(t)dt = \bar{v}$ , which fully deters the citizen because  $\bar{v} = \bar{\zeta}$ .

At this point, we just assume that intimidation cutpoint  $\epsilon^*$  exists and recall that intimidation is costly. Hence, any repressive agent with enough resolve to deter the citizen,  $\mathbb{E}[\zeta | \hat{e}] \geq \bar{\zeta}$ , makes no intimidation efforts higher than  $\epsilon^*$ . Any agent with resolve below  $\epsilon^*$  makes no intimidation effort at all,  $\hat{e} = 0$ .

## 6.2.2 Persuasion absent Intimidation

If the repressive agent does not intimidate,  $\hat{e} = 0$ , the autocrat must use persuasion. The game, by and large, unfolds as discussed in the previous section. Posterior beliefs about the scope of repression alter, though. The autocrat is now expected to stay in power with probability  $\bar{v}_0 < \bar{v}$ . In contrast, the citizen's expected payoffs from a revolt increase,  $r(\bar{v}_0) > r(\bar{v})$ . It might lower the autocrat's securable payoff  $x_{k_0^*}$ , where

$$k_0^* = \left\lfloor n - \frac{2r(\bar{v}_0) - 1}{1 - r(\bar{v}_0)} \right\rfloor, \quad (9)$$

because its index floor strictly increases in the repressive agent's stakes,  $\partial k/\partial v > 0$ , since  $\partial r(\cdot)/\partial v < 0$ . Moreover, the autocrat becomes less likely to tamper with his revelation,

$$\rho_0^* = 2 \left\{ 1 - r(\bar{v}_0) - \frac{2r(\bar{v}_0) - 1}{n - k_0^*} \right\}. \quad (10)$$

In other words, he reveals the most competent government among the potentially proposed with higher probability. Overall, the citizen becomes more likely to accept,

$$\eta_0^* = \frac{x_{k_0^*} - \bar{v}_0}{u_A(i) - \bar{v}_0}. \quad (11)$$

At first glance, lower stakes have ambiguous effects. They directly affect the citizen's likelihood to support a recommended government, but also indirectly through a lower securable payoff  $x_{k_0^*}$ . This indirect effect should be small, though.

**Lemma 4.** *If the repressive agent makes no intimidation efforts,  $\hat{\epsilon} = 0$ , the autocrat must persuade. His information policy resembles Lemma 2. Yet, his securable payoff reduces to  $x_{k_0^*}$ . It also lowers probability  $\rho_0^*$  that he tampers with his revelation. The citizen accepts his proposed government with probability  $\eta_0^*$ . If not able to persuade, the autocrat propagates his ideal government, knowing that the citizen revolts in response.*

### 6.2.3 Domination amid Intimidation

The situation completely changes when the repressive agent does intimidate,  $\hat{\epsilon} = \epsilon^*$ . The citizen no longer prefers a rebellion. They expect severe repercussions otherwise. Consequently, the citizen is fully deterred and the autocrat survives with certainty.

In principle, our setup still allows the citizen to select a government other than the autocrat's ideal without provoking the repressive agent. Yet, their acquiescence to his ideal government yields the highest payoffs for all three players under this shadow of repression. This is despite the fact that propaganda is no longer credible.

**Lemma 5.** *If the repressive agent does intimidate with  $\hat{\epsilon} = \epsilon^*$ , the autocrat's propaganda*

ceases to be informative. He propagates his ideal government. The citizen is intimidated into obedience by the repressive agent's credible threat.

Domination builds on fear. The citizens obeys not because of the autocrat's rhetoric but because of the terror on the streets that precedes it. The autocrat's propaganda is still not obsolete. It nudges the citizen into accepting his ideal government.

#### 6.2.4 Optimal Intimidation

We build upon Lemmas 4 and 5 to show that the repressive agent indeed optimizes her intimidation efforts using cutpoint strategy  $v^*$ . Lemma 5 implies that the repressive agent can expect a payoff of  $v - c(\cdot)$  from intimidation efforts ensuring that the expected scope of repression meets deterrence threshold  $\bar{\zeta}$ ,  $\mathbb{E}[\zeta \mid \hat{e}] \geq \bar{\zeta}$ . Her expected payoff from no intimidation,  $\hat{e} = 0$ , is  $(1/2)v^2 + \bar{\eta}_0^*(v - (1/2)v^2)$ . Parameter

$$\bar{\eta}_0^* \equiv \left[ \frac{1}{n - (k^* - 1)} \right] \sum_{j=k^*}^n \eta_{0,i}^* \quad (12)$$

is the mean of all probabilities  $\eta_{0,i}^*$  that the citizen supports an autocrat's recommendation  $i \in \{k^*, \dots, n\}$ . We derive this formula in the Online Appendix.

We use these expected payoffs to determine the repressive agent's intimidation condition. The repressive agent does intimidate if and only if

$$v - c(\cdot) \geq (1/2)v^2 + \bar{\eta}_0^*(v - (1/2)v^2),$$

and makes no efforts otherwise. Thus, her intimidation condition is

$$\mathcal{B}(v) \equiv \underbrace{[1 - \bar{\eta}_0^*][v - (1/2)v^2]}_{\substack{\text{Expected benefits} \\ \text{from failed persuasion}}} \geq \underbrace{c(\cdot)}_{\substack{\text{Intimidation} \\ \text{costs}}} . \quad (13)$$

Condition 13 suggests that the repressive agent's intimidation incentives effectively depend on her stakes in the autocrat's survival. So does repression,  $\epsilon \leftarrow v \rightarrow \zeta$ . Thus, the citizen informs their posterior beliefs about the repressive agent's stakes through her intimidation efforts. They then use her expected stakes to inform their posterior beliefs about the scope of repression.

The relationship between stakes and intimidation is not trivial. The first term of  $\mathcal{B}(v)$  depends on the repressive agent's expected stakes,  $\bar{v}_0 = \int tf(t)dt$ , because it involves parameter  $\bar{\eta}_0^*$ , and thus  $\eta_0^*$  and floor index  $k_0^*$ . Though, her expected stakes hinge on a cutpoint to be determined by Condition 13 itself. It is mostly driven by the second term of  $\mathcal{B}(v)$ . This suggests the possibility that her expected benefits  $\mathcal{B}(v)$  from failed persuasion cross her intimidation cost function  $c(\cdot)$  multiple times.

**Lemma 6.** *If  $\epsilon^* < \check{\epsilon}$ , where  $\check{\epsilon} \equiv c^{-1}((1/2)[1 - \bar{\eta}_0^*])$ , a unique cutpoint  $v^*$  exists and induces intimidation effort  $\epsilon^*$  such that Condition 13 barely holds,  $\mathcal{B}(v^*) = c(\epsilon^*)$ .*

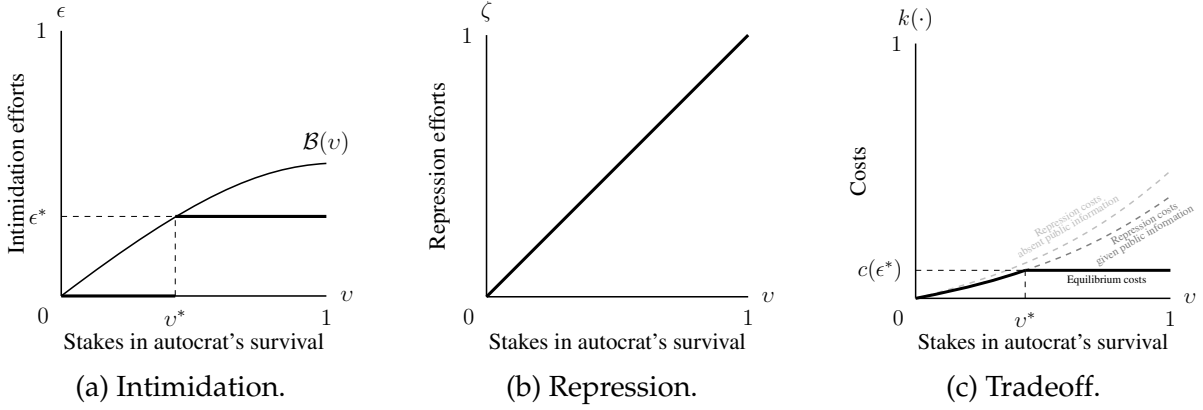
The intuition behind Lemma 6 builds upon the expected scope of repression. The citizen is fully deterred if and only if their expectation meets deterrence threshold  $\bar{\zeta}$ ,  $\mathbb{E}[\zeta \mid \hat{\epsilon}] \geq \bar{\zeta}$ . Equation 1 states that repression efforts depend on the repressive agent's stakes. Thus, we can formulate Condition 3 as a statement about stakes,  $\mathbb{E}[v \mid \hat{\epsilon}] \geq \bar{v}$ .

Another key insight follows from the posterior beliefs about the repressive agent's stakes. A citizen with posterior belief  $\bar{v}$  is barely deterred whereas they are not at prior  $\bar{v}$ . Hence, a unique value  $0 < v^* < 1$  must exist and ensures

$$\mathbb{E}[v \mid \cdot] = \int_{v^*}^1 tf(t)dt = \bar{v}. \quad (14)$$

Equation 14 anchors the first term of  $\mathcal{B}(v)$  and turns it into a constant,  $(1 - \bar{\eta}_0^*(v^*))$ . Equation 14 requires that all repressive types  $v^*$  and higher coordinate on intimidating at  $\hat{\epsilon} > 0$ . All types below  $v^*$  lack incentives to make any effort at all. Consequently, Condition 13 must barely hold for repressive type  $v^*$ . The repressive agent sets intimidation level  $\hat{\epsilon} = \epsilon^*$ , ensuring that  $[1 - \bar{\eta}_0^*(v^*)][v^* - (1/2)(v^*)^2] = c(\hat{\epsilon} = \epsilon^*)$  is a correct

Figure 2: Intimidation versus repression efforts.



statement. Hence, the repressive agent's optimal intimidation strategy is

$$\epsilon = \begin{cases} \epsilon^* & \text{if } v \geq v^*, \\ 0 & \text{if } v < v^*. \end{cases}$$

Interestingly, the repressive agent's leverage to intimidate the citizen into obedience is limited and depends on structural conditions,  $\epsilon^* < \check{\epsilon}$ . Otherwise, she eschews any intimidation work and gambles on the autocrat's persuasion skills.

Her intimidation strategy reflects a tradeoff between costly intimidation that fully deters a revolt and potential repression costs down the line, as Figure 2 illustrates. Suppose her stakes are low,  $v < v^*$ : the repressive agent is willing to gamble on the autocrat's ability to persuade the citizen. She would make no great efforts to safeguard his regime to begin with. If her stakes are high,  $v \geq v^*$ , the repressive agent trades high potential repression costs for lower intimidation costs.

**Proposition 1.** *The repressive agent intimidates at  $\epsilon^*$  if and only if her stakes are high enough,  $v \geq v^*$ . The game then proceeds according to Lemma 5. If her stakes are lower,  $v < v^*$ , she makes no intimidation effort and the game proceeds according to Lemma 4.*

Proposition 1 summarizes the equilibrium. The *posttransition fate* of repressive agents determines their loyalty. If their stakes are low, they are not willing to bear

high costs to protect an autocrat. If they greatly benefit from his rule, however, they would fight fiercely. But they can economize on repression costs through intimidation. Paine (2022) identifies the posttransition fate as a source of disloyalty among security agents. We show that it also has important implications for propaganda.

## 7 Discussion

We focus the discussion of our framework’s implications on (i) the import of repression for propaganda and (ii) an autocrat’s probability to survive.

### 7.1 Repression and Propaganda

Propaganda is rooted in repression. First, an autocrat’s use of persuasion or domination depends on the stakes of repressive agents in his own political survival.

Second, dominant propaganda *per se* does not deter citizens. Nobody is “deceived by the charade” (Wedeen 1999, 73). Yet, the charade communicates “threats intended to deter opposition” (Guriev and Treisman 2022, 68). These threats everyone finds credible—not because of the spoken word but because of its shadow of repression.

Third, repression is always a last resort. If propaganda fails, no autocrat concedes defeat without mobilizing his repressive agents. Counterintuitively, actual repression at the endgame is more likely to materialize under persuasion than domination.<sup>14</sup>

Another reason is more implicit. Consider a benchmark with no repressive agent,  $v = \epsilon = \zeta = 0$ . We call it *liberal democracy* where a representative citizen’s vote decides who governs next. The game’s play resembles Lemma 4 with  $r(0)$  and all consequences it entails. We use this benchmark to examine the effect of expected repression on fake competence claims. Fake claims are measured as the probability  $\rho_0^*$  that the

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<sup>14</sup> Real-world repression might be hard to disentangle from intimidation: repression of some can be intimidation of others.

autocrat tampers with his recommendation given securable payoff  $x_{k^*}$ .

Specifically, we investigate how an increase from zero to  $\bar{v}_0$  stakes in an autocrat's survival (equivalent to  $0 \rightarrow \bar{\zeta}_0$ ) affects this probability,  $\Delta\bar{v}_0 \rightarrow \Delta\rho^* \equiv (\rho_0^* - \rho_B^*)$  (B for *Benchmark*). To simplify exposition, we suppose that the rank of the securable payoff does not change,  $k_0^* = k_B^* = k$ . The difference in the probability of deception is

$$\Delta\rho^* = 2 \left\{ \underbrace{1 + \frac{2}{n-k}}_{\text{Multiplier}} \right\} \underbrace{[r(0) - r(\bar{v}_0)]}_{\substack{\text{Decrease in} \\ \text{revolt payoffs}}}.$$

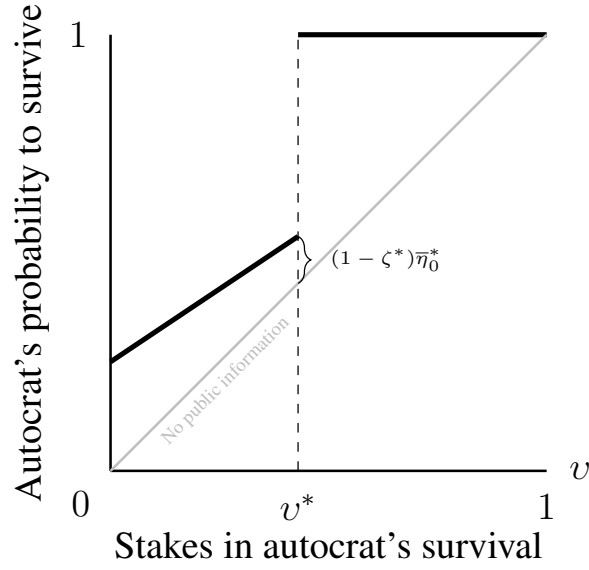
This lower bound reveals two insights. First, an autocrat's probability to tamper increases in expected repression. The shadow of repression thus emboldens autocrats to deceive ordinary people more frequently. Second, a multiplier boosts this increase. This multiplier effect depends on the number of potentially proposed governments,  $(n - k)$ . It is strongest when his ideal government only competes with the second-to-best government for the autocrat,  $k = (n - 1)$ .

**Proposition 2.** *Repression and propaganda are substitutes, complements, or both depending on their respective forms:*

1. *Private interests of repressive agents determine the form of propaganda. If they lack incentives to intimidate, autocrats must persuade (substitute).*
2. *Dominant propaganda alone does not deter. Costly intimidation does, renders credible the threat of repression, and breeds competence claims that lack credibility (complement).*
3. *Repression always remains an autocrat's last resort (substitute).*
4. *The probability that an autocrat deceives increases in expected repression (complements).*

Our findings improve our understanding of propaganda's relationship with repression. They are summarized in Table 1 and Proposition 2.

Figure 3: Autocrat's probability to survive.



## 7.2 Probability to Survive

An autocrat's ex-ante probability to survive increases when he uses either form of propaganda. Figure 3 plots it against his repressive agent's stakes in his survival.

The light-gray diagonal line displays his probability to survive absent public information. When citizens neither observe intimidation nor receive propaganda, the autocrat survives with probability  $\zeta^* = v$ . He is fully dependent on repression.

Consider the black lines. The black line to the left of cutpoint  $v^*$  shows that his probability to survive strictly increases to  $\zeta^* + (1 - \zeta^*)\bar{\eta}_0^*$  if the autocrat uses persuasion.<sup>15</sup> His survival strategy no longer rests solely on repression. Yet, his rule is still vulnerable to failed persuasion. His best scenario materializes to the right of cutpoint  $v^*$ . Citizens are intimidated into obedience. The autocrat survives with certainty.

**Proposition 3.** *Both persuasion and domination strictly increase an autocrat's ex-ante probability to survive. Significant intimidation ensures that he survives with certainty.*

Positive effects of propaganda, and information manipulation more broadly, on an

<sup>15</sup> We derive this formula in the Online Appendix.

autocrat’s survival are an established finding in the literature on autocratic politics (Rosenfeld and Wallace 2024). In theoretical work, it usually results from an autocrat’s commitment to an information environment (Gehlbach et al. 2025; Luo and Rozenas 2018; Yu 2021). We reach this result via cheap talk, avoiding potentially implausible assumptions on how autocrats design information environments.

## 8 Empirical Evidence

Our theoretical predictions are consistent with the party-based autocracies in Gabon, Equatorial Guinea, Angola, and the Republic of Congo at the end of the Cold War. As Table 3 summarizes, all four cases meet our scope conditions.

**International pressure.** In the late 1980s, oil prices plummeted, strangling the economies of the petrostates of Gabon, Angola, and the Republic of Congo. The end of Communism ceased financial support from the Soviet Union, further deteriorating living conditions in the latter two (Tvedten 1993). International institutions and Western donors conditioned financial support on democratic reforms. Equatorial Guinea gambled on the discovery of oil and gas. Prior to a major breakthrough in 1996, its economic growth was built on IMF structural adjustment programs and loans. Its liabilities amounted to about 30% of its average 1980-1989 gross domestic product (GDP).

**Domestic pressure.** The early 1990s witnessed mass protests in Gabon and the Republic of Congo. Each regime was to hold a national conference on its political future. Desire for political change among Equatoguineans became most apparent in the 1995 municipal elections. These were initially considered free and fair by international observers. The *Joint Opposition Platform*—a coalition of six opposition parties—“purported to have won 20 of the 27 municipalities” (Hughes 1996, 443). Delaying the official results, the regime then claimed an overall 52%-victory. Angolans were exhausted from a brutal civil war. As it intensified and living conditions deteriorated, “popular support for the government fell” (Tvedten 1993, 110). In 1991, the interna-

Table 3: Comparison of empirical cases.

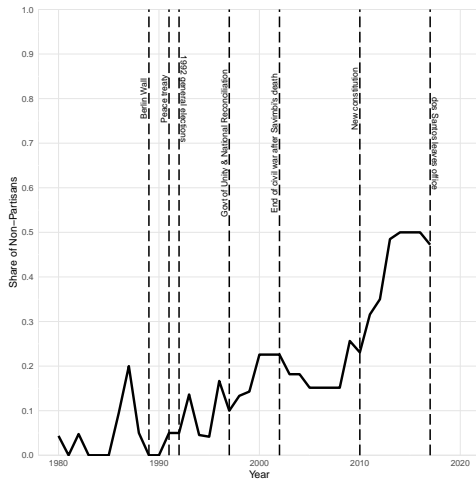
	<i>Equatorial Guinea</i>	<i>Angola</i>	<i>Republic of Congo</i>	<i>Gabon</i>
<i>Regime type</i>	Party-based	Party-based	Party-based	Party-based
<i>Petrostate</i>	After 1996	Yes	Yes	Yes
<i>International pressure</i>	Yes	Yes	Yes	Yes
<i>Domestic pressure</i>	Yes	Yes	Yes	Yes
<i>Stakes in survival</i>	High	Low, then high	Low	Low
<i>Intimidation</i>	Yes	No, then yes	No	No
<i>Competence claims</i>	Sole competence	Invitations, then sole competence	Invitations (after sole competence)	Invitations
<i>Electoral outcome</i>	Win	Surprise win, not accepted	Cohabitation, not accepted	Win
<i>Cabinet composition</i>	Regime	Regime	Coalition	Coalition
<i>Regime outcome</i>	Survival	Civil war (survival)	Civil war (resurrection)	Survival

tional community brokered a peace treaty between the two liberation movements at fight, President José Eduardo dos Santos' ruling *People's Movement for the Liberation of Angola* (MPLA) and the *National Union for the Total Independence of Angola* (UNITA).

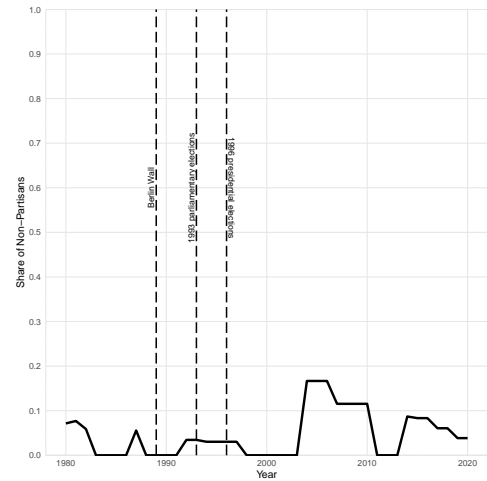
**Gabon.** His repressive agents had low stakes in Bongo's survival. The military's participation in the 1990 general strikes exemplifies this (Burchard and Gregerson 2012). Police efforts to contain the protests were feeble. Bongo responded by replacing 35 cabinet members, bringing in technocrats and political opponents (Figure 4c). A few months later, his political party won a parliamentary majority. Bongo continued to bring a significant number of outsiders into cabinet until his death in 2009.

**Equatorial Guinea.** The repressive apparatus was heavily invested in Nguema's survival—a lieutenant-colonel himself. Military officers occupied prestigious political positions (Matthews and Sá 2024). Since independence, military barriers had been

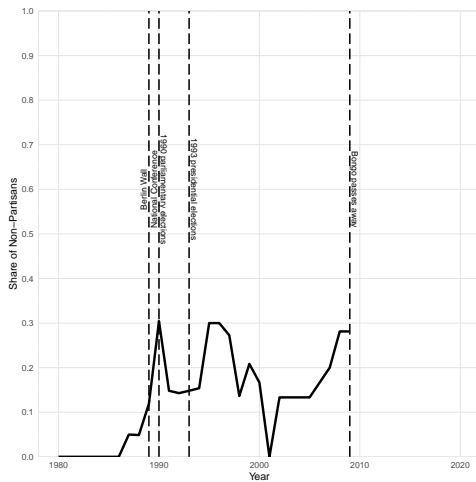
Figure 4: Share of non-partisan members of government, 1980-2020.



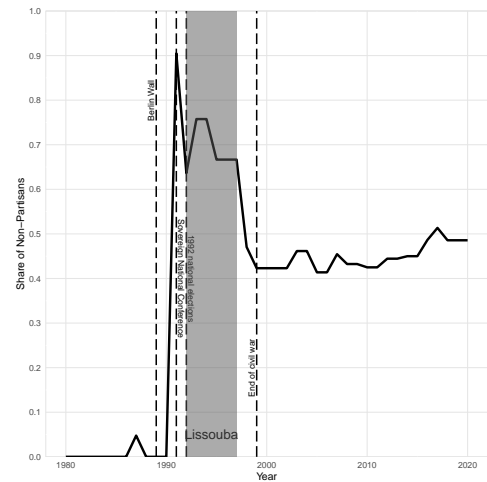
(a) Angola.



(b) Equatorial Guinea.



(c) Gabon.



(d) Republic of Congo.

Note: The share of non-partisans is calculated based on Nyrop and Bramwell’s (2020) *WhoGov* data.

erected across the country to control the population (Sá and Sanches 2021). Nguema’s *Antorchas*—a paramilitary unit—continued committing atrocities in plain sight despite his pledges to liberalize (Amnesty International 1994). Nguema himself was portrayed as guarantor of peace with the sole competence to lead the country “like God in heaven” (BBC Africa 2003). Cabinets were full of Nguema’s acolytes (Figure 4b). Intimidated into obedience, Equatoguineans acquiesced to the electoral charade.

**Angola.** The 1991 peace treaty was meant to integrate all liberation fighters into the Angolan Armed Forces (FAA). Dos Santos’ repressive agents thus expected a bright

posttransition future. It lowered their stakes in his survival. The 1992 campaign period was calm. Many observers considered dos Santos a “sure loser” (Associated Press 2022). His surprise win induced UNITA leader Jonas Savimbi to allege fraud, recalling his fighters from the FAA. It let the stakes of MPLA fighters in dos Santos’ survival surge. UNITA attacked the capital of Luanda, provoking the *Halloween Massacre*: state forces and MPLA adherents killed hundreds of UNITA supporters (Tvedten 1993, 115).

Dos Santos’ commitment to competence changed abruptly. Prior to the elections, he propagated a government of national unity. He replaced several MPLA Central Committee members, bringing in former rivals like Paulo Tuba and Johnny Eduardo Pinnock. Thereafter, he portrayed himself as the only “man of peace” (Birmingham 2015, 112–113). His revised cabinet “did not represent any significant political changes” (Tvedten 1993, 116), as Figure 4a shows. Most Angolans voted MPLA “for [its] promise to deliver a consensual government of reconciliation” (Smith 1992, 101). After the massacre, the riot police was quick to arrest any protests (Associated Press 2022).

The 1994 Lusaka Protocol gave new momentum to peace negotiations and UNITA’s reintegration into the FAA (Vines 1999, 283). In 1997, it culminated in a short-lived Government of Unity and National Reconciliation with UNITA and the *Democratic Party of Angola* (PDA). Yet, the civil war continued until Savimbi’s death. The 2010 Constitution reserves the presidency for the lead candidate of the political party that garners the most votes, thus consolidating MPLA’s political wing as dos Santos’ key support base. It also affected his repressive agents’ stakes in his survival. Consistent with our argument, the number of outsiders in cabinet surged thereafter (Figure 4a).

**Republic of Congo.** The military confirmed its neutrality early at the Sovereign National Conference (Hayward and Landry 1991, 27), distancing itself from President Denis Sassou Nguesso. Nguesso himself was granted amnesty (Weiss et al. 1996, 6). Thus, the repressive agent’s stakes in Nguesso’s survival were low. Intimidation was absent. On the contrary, Weiss et al. (1996) attest an “explosion of free expression” (5).

Prior to the elections, Nguesso was confident to win (Yabara 2021). Hence, he saw

no need to invite outsiders into government. Yet, Nguesso only came in third.

Pascal Lissouba won the presidential run-off but had to appoint the prime minister from among the parliamentary majority. Short of this majority, his *Pan-African Union for Social Democracy* (UPADS) needed to form a coalition. Lissouba turned to Nguesso who supported him in the run-off. Nguesso signalled interest but demanded the key ministries of Interior, Defence, Finance, and Energy, although his *Congolese Party of Labour* (PCT) only represented 8% of the vote. These portfolios would have given him ample leverage to *de facto* control the country. Lissouba only offered less prestigious ministries; Nguesso turned to his former arch enemy and runner-up Bernard Kolélas who led the *Union for Democratic Renewal* (URD)—a coalition of seven political parties. They negotiated a parliamentary majority opposed to Lissouba, effectively imposing a URD-PCT government upon him. Lissouba dissolved the parliament in return.

A hostile standoff led to new parliamentary elections. Nguesso and Kolélas upheld their electoral coalition. But Lissouba's won a slim majority. International observers declared the elections free and fair. Nguesso and Kolélas insisted they were rigged, seeding suspicion and animosity. Meanwhile, Nguesso formed his own militia called *Cobras* whose stakes in his return to power were high. So did Lissouba (*Cocoyes*) and Kolélas (*Ninjas*). Repeated clashes between these militias ignited the first civil war. Like the other two, the *Cobras* were accused of atrocities against opposition supporters. In 1997, President Lissouba was ousted. Back in power and with his *Cobras* dissolved in 2000,<sup>16</sup> Nguesso resorted to inviting outsiders into government (Figure 4d).

## 9 Conclusions

Our framework shows how private interests of repressive agents shape propaganda. It clarifies when propaganda and repression are substitutes or complements. It depends

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<sup>16</sup> The *Cobras* ceased to exist upon a reintegration program of the United Nations.

on the form of propaganda, and whether we think of intimidation or repression.

Autocrats may have leverage to foster stakes in their own survival. Future research should examine this extension. This is no trivial exercise. Counterintuitively, boosting the expected scope of repression, to some extent, heightens the odds of citizens to rebel,  $\partial\eta^*/\partial\bar{v} < 0$ . Pushed far enough, though, repressive agents gain incentives to intimidate citizens into obedience, thus yielding an autocrat's best outcome.

Autocrats invite regime outsiders into government to persuade when talk is cheap. External additions can be portrayed as though an autocrat assigns cabinet posts to the most competent—a service to the greater good. Our account is compatible with others. For instance, Arriola, DeVardo, and Meng (2021) show that such invitations can induce opposition fragmentation. Francois, Rainer, and Trebbi (2015) document how executive power in Africa is shared across ethnic lines—a key political force in contexts where party institutionalization and identification is low (Meng 2021). We explain why ordinary people tolerate and support elite bargains to begin with.

Coopting competent outsiders might seem at odds with loyalty concerns. Autocrats are usually argued to trade competence for loyalty (Egorov and Sonin 2011). Lee and Schuler (2020) show, however, that autocrats have means to mitigate the risk that competent outsiders use government portfolios to build their own support bases. Autocrats tend to recruit outsiders with technocratic rather than political competence. York (2024) adds that technocrat ministers often remain loyalty-bound.

Finally, our framework clarifies the role of propaganda costs. Huang (2015) suggests that domination offers indirect information on regime capacities and resources. Such provision deters because it is costly. But persuasion is also costly in the sense that much effort is put into its machinery. It thus seems more relevant to ask who sends the costly signal. Our answer is that repressive agents send this signal via intimidation. Absurd competence claims are cheap and just a symptom.

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# Online Appendix: Rooted in Repression: A Theory of Propaganda

Felix Dwinger

## Contents

<b>A Beliefs-Based Approach and Securability</b>	<b>1</b>
<b>B Auxiliary Proofs</b>	<b>2</b>
B.1 Generic Function for Expected Payoffs . . . . .	2
<b>C Model of Propaganda</b>	<b>4</b>
C.1 Deterrence Condition . . . . .	4
C.2 Baseline Without Intimidation . . . . .	5
C.3 Full Model With Intimidation . . . . .	9
C.4 Perfect Bayesian Equilibrium . . . . .	10
<b>D Propaganda and Repression</b>	<b>10</b>
<b>E Probability to Survive</b>	<b>11</b>

## A Beliefs-Based Approach and Securability

*Belief-based approach.* A belief-based approach emphasizes the ex-ante distribution over posterior beliefs,  $p \in \Delta\Delta\Theta$ . This distribution is generated from the combination of two components (Aumann and Maschler 1995):

1. all equilibrium beliefs the citizen can possibly form upon messages,
2. each possible strategy of the autocrat.

It must average to the citizen's prior beliefs about any government's competence,  $\mu_0$ . Call any such distribution  $p$  an *information policy*. Every information policy can be generated from this combination (Benoît and Dubra 2011; Kamenica and Gentzkow 2011). We denote the set of all information policies by  $\mathcal{I}(\mu_0) = \{p \in \Delta\Delta\Theta : \int \mu dp(\mu) = \mu_0\}$ .

A belief-based approach permits focusing on *outcomes*. Outcomes are pairs  $(p, s) \in \Delta\Delta\Theta \times \mathbb{R}$ , where the autocrat's ex-ante payoff is denoted by  $s$ . An equilibrium outcome must meet two conditions (Kamenica and Gentzkow 2011):

1. *Bayes' plausibility.* Information policy  $p \in \mathcal{I}(\mu_0)$  must average to the prior,  $\int \mu dp(\mu) = \mu_0$ .
2. *Incentive compatibility.* Incentive compatibility must hold for both the citizen and the autocrat under cheap talk (Lipnowski and Ravid 2020).<sup>1</sup>

As for the citizen, incentive compatibility requires that the autocrat's ex-ante payoff must be among his possible continuation values  $V(\mu)$  for all posterior beliefs  $\mu$  with support in information policy  $p$ . Any posterior belief must therefore enable the autocrat to get his ex-ante payoff as an interim payoff when the citizen best responds.

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<sup>1</sup> It is also called *intersection condition*: both its parts can succinctly be summarized by intersection  $s \in \cap_{\mu \in \text{supp}(p)} V(\mu)$ , where  $\text{supp}(p)$  is the support of information policy  $p$  (Lipnowski and Ravid 2020, 1637).

As for the autocrat, his ex-ante payoff must be equal to his specific continuation value  $v(\mu)$  that he can attain, given the citizen forms posterior belief  $\mu$  upon his message.

*Securability.* His transparent motives permit us to ignore the autocrat's incentive compatibility constraints when focusing on his least favorite message in any given information policy (Lipnowski and Ravid 2020). In our model, the autocrat can *secure* an ex-ante payoff  $x_k \geq \bar{v}$  if an information policy  $p \in \mathcal{I}(\mu_0)$  generates with certainty a posterior belief that allows the autocrat to get at least ex-ante payoff  $x_k$  when the citizen best responds,  $p\{\mu : v(\mu) \geq x_k\} = 1$ . Ex-ante payoff  $x_k$  is *securable* if prior belief  $\mu_0$  lies in the closed convex hull of information policy  $p$ ,  $\mu_0 \in \overline{\text{co}}\{p : v(\mu) \geq x_k\}$ .

## B Auxiliary Proofs

### B.1 Generic Function for Expected Payoffs

**Lemma B.1.** *Any player  $l$ 's (with  $l \in \{A, C, R\}$ ) ex-ante expected payoffs from persuasion can be summarized by generic function  $G := \beta + \bar{\eta}_0^*(\alpha - \beta)$ , where*

$$\bar{\eta}_0^* \equiv \left[ \frac{1}{n - (k^* - 1)} \right] \sum_{j=k^*}^n \eta_j, \quad (\text{B.1})$$

$\alpha$  is a proxy for player  $l$ 's (expected) payoffs from citizen  $C$ 's support for recommended government  $i \in \{k^*, \dots, n\}$ , and  $\beta$  is a proxy for player  $l$ 's (expected) payoffs from a revolt.

*Proof.* Suppose autocrat  $A$  can secure some  $x_{k^*}$  with  $k^* \in \{1, \dots, n\}$ . Then, player

$l \in \{A, C, R\}$  can expect

$$\begin{aligned}
\mathbb{E}U_l(k^*, n) = & \rho^* \left\{ P[i = k^*][\eta_{k^*}\alpha + (1 - \eta_{k^*})\beta] + \right. & (B.2) \\
& P[i = k^* + 1][\eta_{k^*+1}\alpha + (1 - \eta_{k^*+1})\beta] + \dots + \\
& P[i = n - 1][\eta_{n-1}\alpha + (1 - \eta_{n-1})\beta] + \\
& \left. P[i = n][\eta_n\alpha + (1 - \eta_n)\beta] \right\} + \\
& [1 - \rho^*] \left\{ P[i_{k^*} = k^*][\eta_{k^*}\alpha + (1 - \eta_{k^*})\beta] + \right. \\
& P[i_{k^*} = k^* + 1][\eta_{k^*+1}\alpha + (1 - \eta_{k^*+1})\beta] + \dots + \\
& P[i_{k^*} = n - 1][\eta_{n-1}\alpha + (1 - \eta_{n-1})\beta] + \\
& \left. P[i_{k^*} = n][\eta_n\alpha + (1 - \eta_n)\beta] \right\},
\end{aligned}$$

where

$$P[i = j] = \frac{1}{n - (k^* - 1)}$$

is the probability that autocrat  $A$  randomly draws government  $j \in \{k^*, \dots, n\}$  before publicly signaling it with probability  $\rho^*$  (with slight abuse of notation) and

$$P[i_{k^*} = j] = \frac{1}{n - (k^* - 1)}$$

is the probability that government  $j \in \{k^*, \dots, n\}$  is the most competent and revealed by autocrat  $A$  with probability  $(1 - \rho^*)$ . With this notation in hand, we can simplify

Equation B.2,

$$\begin{aligned}
\mathbb{E}U_l(k^*, n) &= \left[ \frac{1}{n - (k^* - 1)} \right] \sum_{j=k^*}^n \left( \eta_j \alpha + (1 - \eta_j) \beta \right) & (B.3) \\
&= \left[ \frac{1}{n - (k^* - 1)} \right] \sum_{j=k^*}^n \left( \beta + \eta_j [\alpha - \beta] \right) \\
&= \left[ \frac{n - (k^* - 1)}{n - (k^* - 1)} \right] \beta + (\alpha - \beta) \underbrace{\left[ \frac{1}{n - (k^* - 1)} \right] \sum_{i=k^*}^n \eta_i}_{= \bar{\eta}_i^*} \\
&= \beta + \bar{\eta}_i^* (\alpha - \beta)
\end{aligned}$$

Equation B.3 is player  $l$ 's expected payoffs given  $k^*$ . This concludes the proof.  $\square$

## C Model of Propaganda

### C.1 Deterrence Condition

*Proof. Proof of Lemma 1.* Lemma 2 implies that the citizen's posterior belief  $\mu$  that any proposed government is the most competent among  $k^*$  through  $n$  is strictly higher than prior belief  $\mu_0$ ,  $\mu > \mu_0$ . Deterrence threshold  $\bar{\zeta}$  strictly decreases in the citizen's posterior beliefs about the most competent government (proxied by  $\mu_0$ ),  $\partial \bar{\zeta} / \partial \mu_0 < 0$ . Hence, intimidation inducing expected repression  $\mathbb{E}[\zeta \mid \hat{e}] = \bar{\zeta}$  fully deters a revolt regardless of the identity  $i \in \{k^*, \dots, n\}$  of the government suggested in equilibrium.

Lemmas 3 and 5 suggest that, given the autocrat cannot secure a more favorable payoff or the citizen is fully deterred, the autocrat's information policy  $p_{k^*}^*$  ceases to be informative and the citizen must rely on prior belief  $\mu_0$ . In these cases, intimidation inducing expected repression  $\mathbb{E}[\zeta \mid \hat{e}] = \bar{\zeta}$  is barely enough to deter a revolt.

Lemma 1 follows from the insight that full deterrence always makes the autocrat propose his ideal government  $n$ . We prove it by contradiction: if communication is informative, the repressive agent can infer rank  $k^*$ , the autocrat's information policy

$p(\mu)$ , and thus the expected posterior equilibrium belief  $\mathbb{E}[\mu \mid k^*, n] \equiv \bar{\mu}$  (with slight abuse of notation). Substituting  $\bar{\mu}$  (replacing  $\mu_0$ ) into Condition 3 yields  $\bar{\zeta}_{\bar{\mu}}$ , where  $\bar{\zeta}_{\bar{\mu}} < \bar{\zeta}$ . According to altered Condition 3, intimidation inducing expected repression  $\bar{\zeta}_{\bar{\mu}}$  would (partly) deter if the autocrat's information policy was informative. Suppose this is true. Then, Lemma 5 suggests that the autocrat always proposes his ideal government. Citizen  $C$ 's posterior distribution becomes degenerate,  $p = \delta_{\mu_0}$ . They must rely on prior  $\mu_0$ . The deterrence threshold then increases to  $\bar{\zeta}$ . Because  $\bar{\zeta}_{\bar{\mu}} < \bar{\zeta}$ , expected repression  $\bar{\zeta}_{\bar{\mu}}$  no longer deters citizen  $C$ . This yields a contradiction.  $\square$

*Proof. Proof of Corollary 1.* It immediately follows from the text and Lemma 1. In our (special) case with uniform priors, the highest posterior belief is equal to the expected posterior equilibrium belief  $\bar{\mu}$ . It simplifies to  $\bar{\mu} = (1 - \rho^*) + \rho^*/(n - k^* + 1)$ , where  $\rho^*$  is defined in Equation 7. Consequently,  $\bar{\zeta}_+ = \bar{\zeta}_{\bar{\mu}}$ .  $\square$

## C.2 Baseline Without Intimidation

*Proof. Proof of Lemma 2.* Our proof involves five steps. First, we establish that Condition 5 is a necessary condition. Second, we establish four facts due to exchangeability. Third, we apply Lipnowski and Ravid's (2020) securability theorem. Fourth, we ensure that autocrat  $A$ 's and citizen  $C$ 's strategies are incentive-compatible. Fifth, we establish that Condition 5 is necessary and sufficient.

*Necessary condition.* Fix  $k \in \{1, \dots, n\}$ . Condition 5 must be true: for any  $k$ , the highest of all expected values  $\theta_{x_i}$  must meet citizen  $C$ 's expected revolt payoff  $r(\bar{v})$ ,

$$\mathbb{E} \left[ \max_{i \in \{k, \dots, n\}} \theta_{x_i} - r(\bar{v}) \right] \geq 0.$$

*Exchangeability.* Prior  $\mu_0$  is exchangeable. This assumption induces three facts (see Lipnowski and Ravid (2020, 1653–1654)): first, for any given  $i \in \{k, \dots, n\}$ , the prior expected value of government  $i$  is equal to both any other government  $j$ 's and the posterior expected value of any government  $j$  indexed lower than  $k$ .

**Fact 1.**  $\mathbb{E}_0[\theta_{x_i}] = \mathbb{E}_0[\theta_{x_j}] = \mathbb{E}_i^k[\theta_{x_j}]$  for any  $j \in \{1, \dots, k-1\}$ .

Second, the prior expected value of government  $i$  must lie in the convex hull of the posterior expected value of government  $i$  and any other government  $j \in \{k, \dots, n\} \setminus \{i\}$ .

**Fact 2.**  $\mathbb{E}_0[\theta_{x_i}] \in \text{co}\{\mathbb{E}_i^k[\theta_{x_i}], \mathbb{E}_i^k[\theta_{x_j}]\}$  for  $j \in \{k, \dots, n\} \setminus \{i\}$ .

Third, the posterior expected value of government  $i$  must meet its prior expected value given that government  $i$  among  $k$  through  $n$ .

**Fact 3.**  $\mathbb{E}_i^k[\theta_{x_i}] \geq \mathbb{E}_0[\theta_{x_i}]$ .

Facts 1 through 3 imply that government  $i$ 's posterior expected value is weakly higher than the expected value of any other  $j \in \{1, \dots, n\} \setminus \{i\}$ ,  $\mathbb{E}_i^k[\theta_{x_i}] \geq \mathbb{E}_i^k[\theta_{x_j}]$ .

Moreover, if government  $i$  yields citizen  $C$  their highest payoff, its posterior expected value must be the maximum among all governments indexed  $k$  or higher,

$$\mathbb{E}_i^k[\theta_{x_i}] = \mathbb{E} \left[ \max_{i \in \{k, \dots, n\}} \theta_{x_i} \right] \equiv \hat{\theta}^k.$$

Because index  $i$  can apply to each government  $i \in \{k, \dots, n\}$ , it must hold for any.

**Fact 4.**  $\mathbb{E}_i^k[\theta_{x_i}] = \hat{\theta}^k$ .

Condition 5 implies that citizen  $C$ 's posterior expected value of government  $i$  must be such that  $\mathbb{E}_i^k[\theta_{x_i}] = \hat{\theta}^k \geq r(\bar{v})$  for any government  $i \in \{k, \dots, n\}$ .

Autocrat  $A$  can tighten the set of governments indexed  $k$  or higher by selecting the highest  $k^*$  for which Condition 5 holds. The properties of the uniform distribution suggest the expected maximum across all governments indexed  $k$  or higher is defined in Equation 6. Substituting Equation 6 into Condition 5 and solving for  $k$  yields

$$k^* = \left\lfloor n - \frac{2r(\bar{v}) - 1}{1 - r(\bar{v})} \right\rfloor. \quad (\text{C.4})$$

*Securability.* Facts 1 through 4 plus floor  $k^*$  in Equation C.4 suggest that autocrat  $A$  can secure a payoff of  $x_{k^*} \geq \bar{v}$  by revealing in equilibrium the most competent

government among  $k^*$  through  $n$ ,

$$\mathbf{i}_{k^*} := \arg \max_{i \in \{k^*, \dots, n\}} \theta_{x_i}.$$

At least one posterior belief  $\mu$  in information policy  $p_{k^*}$  is not incentive-compatible, however, because autocrat  $A$  never reveals the most competent government with certainty. If this was the case, citizen  $C$  would always support his recommendation. But then, autocrat  $A$  would have incentives to deviate to suggesting the government that is most profitable for himself for any  $i \in \{k^*, \dots, n-1\}$ .

Nevertheless, Lipnowski and Ravid's (2020, 1638–1639) securability theorem implies any incentive-incompatible posterior belief  $\mu$  with support in information policy  $p_{k^*}$  can be transformed into an incentive-compatible posterior belief  $\mu'$ . This is possible iff  $\mu_0 \leq \mu' \leq \mu$ . Posterior belief  $\mu'$  exists because (i)  $v(\mu) \geq x_{k^*} \geq \bar{v}$  and (ii) autocrat  $A$ 's continuation value  $V$  is a Kakutani correspondence given Berge's theorem.

*Incentive compatibility.* Autocrat  $A$ 's ex-ante expected payoffs must equal his interim payoffs to ensure incentive compatibility. Bayes' plausibility requires that citizen  $C$ 's posterior beliefs average to their prior beliefs given autocrat  $A$ 's information policy  $p_{k^*}^*$ ,  $\int \mu dp(\mu) = \mu_0$ . Consequently, citizen  $C$  must be indifferent between supporting recommended government  $i$  and a revolt. Therefore, autocrat  $A$ 's information policy  $p_{k^*}^* \in \mathcal{I}(\mu_0)$  barely secures payoff  $x_{k^*}$  if he recommends with probability  $(1 - \rho)$  the most competent government among  $k^*$  through  $n$ , and a randomly drawn government  $j \in \{k^*, \dots, n\}$  otherwise. The prior expected value for any government  $j \in \{k^*, \dots, n\}$  is  $\mathbb{E}[\theta_{x_j}] = 1/2$ . It yields equilibrium policy  $p_{k^*}^*$  with  $\rho^*$  in Equation 7.

Autocrat  $A$ 's information policy  $p_{k^*}^*$  induces citizen  $C$  to support any proposed government  $i \in \{k^*, \dots, n\}$  with positive probability in equilibrium. His expectation of  $\max_{i \in \{k^*, \dots, n\}} \theta_{x_i} - r(\bar{v})$  is nonnegative given Condition 5 and autocrat  $A$ 's information policy  $p_{k^*}^*$ . Still, citizen  $C$  must keep autocrat  $A$  indifferent between his proposed government and a revolt to avoid deviation. Consequently, citizen  $C$  supports proposed

government  $i$  with probability

$$\eta_i^* = \begin{cases} 1 & \text{if } i = k^*, \\ \frac{x_{k^*} - \bar{v}}{x_{k^*+1} - \bar{v}} & \text{if } i = k^* + 1, \\ \vdots & \vdots \\ \frac{x_{k^*} - \bar{v}}{x_{n-1} - \bar{v}} & \text{if } i = n - 1, \\ \frac{x_{k^*} - \bar{v}}{1 - \bar{v}} & \text{if } i = n. \end{cases}$$

*Necessary and sufficient condition.* In response, autocrat  $A$  lacks incentives to deviate from information policy  $p_{k^*}^*$ . Consequently, Condition 5 is necessary and sufficient to secure payoff  $x_{k^*}$  in equilibrium. This concludes the proof.  $\square$

*Proof. Proof of Corollary 2.* It immediately follows from the fact that autocrat  $A$ 's information policy  $p_{k^*}^*$  reveals with probability  $(1 - \rho^*)$  the most competent government among  $k^*$  through  $n$ . Citizen  $C$ 's equilibrium play is thus

$$\underbrace{\bar{\eta}_0^*}_{\text{Citizen } C\text{'s mean}} > \underbrace{0}_{\text{Citizen } C\text{'s strategy } \sigma_0 \text{ ex-ante}}$$

equilibrium strategy  $\sigma^*(n, \cdot)$       strategy  $\sigma_0$  ex-ante

with  $\bar{\eta}_0^*$  defined in Equation 12. Hence, autocrat  $A$ 's propaganda is persuasive.  $\square$

*Proof. Proof of Lemma 3.* Autocrat  $A$  ignores any government  $j \in \{1, \dots, n - 1\}$  because a revolt yields a higher expected payoff,  $\bar{v} > x_{n-1}$ . But then, only his ideal government  $n$  is left, which autocrat  $A$  signals with certainty. Consequently, citizen  $C$ 's posterior belief distribution is degenerate,  $p \in \delta_{\mu_0}$ . Citizen  $C$  cannot update his beliefs and revolts given Assumption 1.  $\square$

### C.3 Full Model With Intimidation

*Proof. Proof of Lemma 4.* The proof is similar to Lemmas 2 and 3 with  $\bar{v}_0$  replacing  $\bar{v}$  and  $r(\bar{v}_0)$  replacing  $r(\bar{v})$ . Autocrat  $A$ 's and Citizen  $C$ 's expected revolt payoffs  $\bar{v}_0$  and  $r(\bar{v}_0)$ , respectively, follow from the text. Clearly, deterrence threshold  $\bar{\zeta}$  does not constrain because  $\mathbb{E}[\zeta \mid \hat{\epsilon} = 0] < \mathbb{E}[\zeta]$ , and  $\mathbb{E}[\zeta] < \bar{\zeta}_+$  by assumption.  $\square$

*Proof. Proof of Lemma 5.* Suppose Deterrence Condition 3 holds. Citizen  $C$  is fully deterred given repressive agent  $R$ 's intimidation efforts  $\hat{\epsilon} = \epsilon^*$ . Hence, citizen  $C$ 's securable equilibrium payoff is  $E[\theta_{x_j}] = \mu_0 = 1/2$  because prior beliefs are exchangeable.

Consider autocrat  $A$ 's incentive-compatibility constraint to determine his equilibrium policy  $p_{k^*}^*$ . If  $\hat{\epsilon} = \epsilon^*$ , then

$$\underbrace{[1 - \rho] \mathbb{E} \left[ \max_{i \in \{k^*, \dots, n\}} \theta_{x_i} \right]}_{\text{Revelation}} + \underbrace{\rho \mathbb{E}[\theta_{x_j}]}_{\substack{\text{Tampered} \\ \text{recommendation}}} = \mathbb{E}[\theta_{x_j}].$$

Rearranging, substituting, and simplifying shows this equation holds iff  $k^* = n$ . Autocrat  $A$  can secure his most favorable payoff  $x_n = 1$ , signaling his ideal government with certainty. His information policy  $p_{k^*}^*$  then ceases to be informative: citizen  $C$ 's posterior distribution is degenerate,  $p = \delta_{\mu_0}$ .

Citizen  $C$ 's degenerate posterior distribution has two effects. First, threshold  $\bar{\zeta}$  in Deterrence Condition 3 must apply. Second, citizen  $C$  lacks incentives to deviate from supporting the autocrat's ideal government,  $\sigma^* = n$ . Their expected payoff from any government  $j \in \{1, \dots, n - 1\}$  off the path is equally  $E[\theta_{x_j}] = \mu_0 = 1/2$ . Revolting makes them worse off given  $\hat{\epsilon} = \epsilon^*$ . In equilibrium, autocrat  $A$  thus propagates his ideal government and citizen  $C$  supports it. This equilibrium yields the highest payoffs for all players given citizen  $C$  is fully deterred.  $\square$

## C.4 Perfect Bayesian Equilibrium

*Proof. Proof of Lemma 6.* Condition 13 follows from the text and Lemma B.1 with  $\alpha = v$  and  $\beta = 1/2v^2$ . Lemma 6 follows from the text and the fact that intimidation is costly. Rewrite repressive agent  $R$ 's intimidation condition as

$$\underbrace{[1 - \bar{\eta}_0^*(v^*)]}_{\equiv z(v^*)} \underbrace{[v - (1/2)(v)^2]}_{\equiv w(v)} \geq c(\epsilon^*). \quad (\text{C.5})$$

Its right-hand side (RHS) is constant  $c(\epsilon^*) \in (0, 1/2)$ . The boundaries on intimidation costs  $c(\cdot)$  follow from Assumption 3 and the limits of repression costs,  $\lim_{\zeta \rightarrow 1} k(\cdot) = 1/2$ . Its left-hand side's (LHS) first term is a constant, where  $z(v^*) \in (0, 1)$ . Its second term strictly increases in  $v$ ,  $\partial[\cdot]/\partial v > 0$ . In its limits,  $\lim_{v \rightarrow 0} w(v) \rightarrow 0$ ,  $\lim_{v \rightarrow 1} w(v) \rightarrow 1/2$ . We use this upper limit to establish that a cutpoint  $v^*$  exists if and only if

$$\epsilon^* < \check{\epsilon} \equiv c^{-1}\left(\frac{1}{2}[1 - \bar{\eta}_0^*]\right) \Leftrightarrow \frac{c(\epsilon^*)}{[1 - \bar{\eta}_0^*(v^*)]} < \frac{1}{2}. \quad (\text{C.6})$$

If Condition C.6 holds, cutpoint  $v^*$  is unique. Thus, any repressive type  $v < v^*$  sets  $\epsilon = 0$ . Any repressive type  $v \geq v^*$  sets  $\epsilon = \epsilon^*$ . If Condition C.6 is violated, it follows from  $\lim_{v \rightarrow 0} w(v) \rightarrow 0$  that any repressive type sets  $\epsilon = 0$ . Autocrat  $A$  must persuade.  $\square$

*Proof. Proof of Proposition 1.* It follows from the text and Lemmas 4, 5, and 6.  $\square$

## D Propaganda and Repression

*Proof. Proof of Proposition 2.* Part (1) follows from Proposition 1 and Lemma 4. Part (2) follows from Proposition 1 and Lemma 5. Part (3) follows from Lemmas 2 and 3. Part (4) follows from the text.  $\square$

## E Probability to Survive

*Proof.* **Proof of Proposition 3.** Absent intimidation efforts and his ability to use propaganda, autocrat  $A$ 's probability to survive is  $\zeta^* = v$  given Assumptions 1 and 2 plus Corollary 1. We can use Lemma B.1 with  $\alpha = 1$  and  $\beta = \zeta^*$  to calculate autocrat  $A$ 's probability to survive given intimidation efforts  $\eta^* = 0$ . The rest follows from Proposition 1 and the text.  $\square$

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