The *Reverse Cargo Cult:* Why Authoritarian Governments Lie to Their People

Konstantin Sonin*

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Abstract

Why did the Soviet Union organize regular elections, national and local, with one candidate and reported 99.9% support with 99.9% turnout? Were the Soviet citizens so stupid that they did not understand that they have no say in choosing their government? The *Reverse Cargo Cult* metaphor explains why dictators tell their citizens lies that citizens know to be lies: a verifiable lie told by a politician changes citizens' perceptions of politicians and reduces their willingness to replace them. The model explains the mechanics of authoritarian propaganda that puts much emphasis on persuading citizens how bad foreign politicians are.

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*University of Chicago, ksonin@uchicago.edu. The author is grateful to Sergei Guriev, Zhaotian Luo, Adam Przeworksi, Joel Sobel, and Alexei Zakharov for very helpful comments.

"In our country, the lie has become not just a moral category, but a pillar of the state."

Alexander Solzhenitsyn[1]

Introduction

Back in the 1980s, when I was a kid in Moscow, my parents took me to the polling place on election days. "Draw whatever you want on this piece of paper or just cross from corner to corner and put it over there." It was fascinating – why can you draw what you want? When I got older, more interesting questions arose: What are my parents choosing? (In Russian, the word *vybory*, elections, literally means "the choice"). Why is there only one candidate in our district – whom does he win against and who can he lose to? (In 1984, the dying General Secretary of the Communist Party and Chairman of the Presidium of the Supreme Soviet of the USSR, Konstantin Chernenko, was this one candidate in our local electoral district.) The ballot did not suggest any way to vote "no" (see the photo in the Appendix). Many years have passed and new questions have appeared. Why were there elections in the USSR? With a single candidate on every ballot and the turnout and vote for this single candidate reported as 99.9%, was there a chance that Soviet citizens *did not* know this was not an election?

There are many explanations for why there were elections in the Soviet Union organized in a way that the Soviet people knew that this was not, actually, an election, but there is no consensus (see, e.g., Przeworski, 1991). My explanation is as follows: the "elections" organized in the USSR did not fool the Soviet people: they knew that this is a farce. Still, there was a propaganda effect: seeing the elections in their domestic country as a farce, citizens inferred that elections in other countries are as farcical. And this was not specifically about elections. In the introduction to their *Authoritarian Constitutions* edited volume, Tom Ginsburg and Alberto Simpser applied this theory to the Soviet constitution adopted under Stalin:

[1] There is an even more relevant quote on Soviet official lies often attributed to Alexander Solzhenitsyn, the 1970 laureate of the Nobel Prize in Literature: *"We know that they are lying, they know that they are lying, they even know that we know they are lying..."*. Unfortunately, this quote is not authentic. In contrast, the epigraph is a genuine line from Solzhenitsyn's interview to Western media in January 1974 as cited in, e.g., Solzhenitsyn Calls on Russians to Reject 'the Lie', *New York Times*, 01/22/1974.

When Stalin included his list of rights in the 1936 constitutional text, he was debasing the very currency of rights and suggesting to his information-starved citizenry that rights everywhere were meaningless promises. Soviet citizens were perfectly aware that they were deprived of many rights listed in the Constitution — hence, other countries' constitutions do not work as well.

To explain the intuition of how easily verifiable lies work, consider another personal story, yet now let us rewind a generation back: in 1959, the American National Exhibition took place in Moscow.[2] This was a very big event – Soviet leader Nikita Khrushchev and US Vice President Richard Nixon opened the exhibition. For Soviet citizens, the fair offered a glimpse into a world from which they had been isolated for forty long years. My father, 17, recalls that the exhibition featured a "typical" US kitchen. It included a dishwasher, a refrigerator, a range, and an electric juicer, an item that Khrushchev found particularly fascinating. By then, the majority of Americans already owned washing machines and televisions, but these items remained well beyond the reach of all but very few Soviet households. One would think that the advantages of capitalism over socialism would have been obvious to anyone. However, my father recalls that the "typical" Soviet appliances shown at the exhibition were roughly equivalent to the U.S. kitchen display. The only problem was that many Soviets saw these appliances for the first time in their lives at the exhibit. Naturally, my father and many others assumed that the US kitchen was as fake as the Soviet display.[3] Seeing that their government so obviously lies to them, Soviet citizens concluded that the foreign government must be lying as well.

The same was true for the Soviet elections. Soviet authorities did not stage their ersatz elections to try to give a semblance of legitimacy to the regime; voters knew that the whole thing was a sham. The Soviet citizens got convinced that the elections in other nations were not better. Thus, they were not stripped of their choice by their leader; they were having the same range of options as other people around the world. Even if quality of life was poor,

[2]The American National Exhibition was held in Moscow's Sokolniki Park in July-September, 1959.

[3]Apparently, Nikita Khrushchev did not himself believe that the American kitchen represents what was available to an American middle-class family. *"There is no more truth in showing this as the typical home of the American worker than, say, in showing the Taj Mahal as the typical home of a Bombay textile worker,"* lamented the Soviet leader.

wages stagnating, and lines for basic goods became longer and longer, this was not the leadership's fault.

This paper offers an exercise in rational choice reasoning in which a strategic domestic politician, an authoritarian leader, decides what to tell citizens about the quality of their life, which they already know. It appears that lying makes strategic sense: citizens make inference not only about the leader's competence, but about the integrity of politicians as a class. Then, when a foreign politician tells them how good things are in her country, domestic citizens, in the absence of independent sources of information, infer that the foreign politician is lying, the quality of life in the foreign country is bad, which means that politicians are incompetent as a class, and, finally, their bad situation is not their domestic leader's fault.

There is a substantial literature trying to explain "authoritarian elections" (see Gandhi and Lust-Okar, 2009 and Miller, 2015, for recent surveys). Przeworski (2009) argues that regimes use "plebiscitary elections" to demonstrate that it can "force everyone to appear in a particular place on a particular day and perform the act of throwing a piece of paper into a designated box". My model adds to Przeworksi's argument the explanation why the force is applied to make everyone participate in *elections* rather than in another equally performative ritual.

Focusing on the other element of Przeworski's argument, Simpser (2013), empirically, and Egorov and Sonin (2021), theoretically, suggest that electoral fraud is used to "project strength". Cox (2009), Little, Tucker and LaGatta (2015) and Miller (2015) argue that regimes organize controlled elections to gather information.

Finally, authoritarian elections might define and enforce power-sharing or rent-sharing agreements among elites (Boix and Svolik, 2013; Gandhi and Przeworski, 2007; Martinez-Bravo, Mukherjee and Stegmann, 2017). Note that neither of these explanations would apply to authoritarian elections, in which elections are uncontested in every district, votes are not properly counted and aggregated, and the reported turnout and vote for the candidate is 99.9 percent regardless of the actual turnout and vote.

There is an emerging literature on situations in which citizens make inferences about the quality of the pool of all available politicians from the performance of those politicians in of-

fice (Caselli and Morelli, 2004; Meirowitz and Tucker, 2007; Gratton, Lee and Yousaf, 2024). In our model, this result comes early; the substantive discussion expands on this observation by focusing on a specific mechanism. In Belmonte and Rochlitz (2020), the dictator selectively reminds the population about the traumatic experience of the past; unlike in our model, the propaganda in Belmonte and Rochlitz (2020) does not involve Bayesian updating.

In a concurrent paper, Zakharov (2024) assumes that a media lies to its readers to persuade them that the competing media is lying. The media might report untruth for no reason, just because it is the type reporting the opposite of the truth. Such media might exist (and perhaps exist in the real world) only because of the public's preference for certain types of news – the irrational preference. My model demonstrates that one does not need to assume that the receiver of the message is gullible: being uninformed (as the domestic public is about the true state of affairs in the foreign state) suffices.

Substantively, the point of the model is *not* that information manipulation must be studied exclusively through the rational choice approach. In fact, assuming full rationality in a real-life situation might be a stretch; other approaches to studying these situations may be far more fruitful. This model helps to clarify which situations require rejection of the rational choice approach and which do not. Specifically, the fact that information is being inferred from the fact that the sender is lying does not require, by itself, abandoning the rationality assumption.

The rest of this note is organized as follows. Section 2 explains the metaphor of *reverse cargo cult*. Section 3 briefly discusses a mathematical definition of a "lie". Section 4 introduces the formal model and Section 5 proceeds with the analysis. Section 6 concludes with a brief discussion of *whataboutism* and some other forms of modern propaganda.

2 The *Reverse Cargo Cult*

The term *cargo cult*, Western-centric and burdened with pejorative connotations, has been used vaguely in popular anthropology to describe a situation in which a mechanical replica of a genuine mechanism is expected to produce the same results as the original mechanism

(Worsley, 1959). Dimitris Xygalatas, an anthropologist at the University of Connecticut, describes an indigenous community on a tropical island in the South West Pacific, which builds a full-size wooden replica of a light aircraft and a landing strip in the hope that this will cause "cargo", the desired Western-produced material goods to appear.[4] When applied to politics, the cargo cult would be, for example, literally borrowing the US constitution with the hope that this would, by itself, lead to the creation of competitive policy and, eventually, a developmental miracle.

The *reverse cargo cult* is a metaphor for the phenomenon studied in this paper. When those who live with the cargo cult notice that the cargo is not appearing, they conclude that the Western planes they saw are also made of wood and also do not fly[5] A Soviet citizen who observes that the elections they participate in are fake and cannot result in any meaningful change concludes that elections in other countries are as fake and cannot, even hypothetically, result in any meaningful change.

Guriev and Treisman (2022), in their opus magnum on modern dictatorships, emphasize that a key feature of informational dictatorship is to censor information about the degree of censorship. This results in the perception of the domestic public that their media are as partially free as the media in democratic countries.

The reverse cargo cult metaphor might be useful far beyond political pragmatics. Students of cognition know the phenomenon of "national narcissism," when people drastically overestimate the life in their countries. Zaromb et al. (2018) report results of the study in which 6,185 students, all native citizens, from 35 countries were asked "What contribution do you think the country you are living in has made to world history?" The cumulative estimates totaled 1,156.4% of human history; students from Russia, the United Kingdom, and India estimated their countries' contributions at 60.8%, 54.6%, and 53.9%, respectively. Although results of such surveys are notoriously difficult to interpret, people's perception that things are bad in other countries has been noted in many contexts. The reverse cargo cult

[4] What Cargo Cult Rituals Reveal About Human Nature, *Sapiens*, 10/20/2022. Some modern anthropologists are making a strong argument against using the metaphor of a cargo cult at all.

[5] To the best of my knowledge, the words the *reverse cargo cult* were first used, in Russian, by political commentator and professor Ekaterina Schulmann in her LiveJournal blog post The Straw Airplane in January 2010.

model highlights the political implications of these feelings: the worse things are abroad, the lower are the incentives to demand a change at home.

An important caveat to the reverse cargo cult metaphor is that the story assumes, ultimately, some irrationality on the indigenous community part: in the beginning of the story, they do know that Western aircraft actually do fly, but forget this information in the end. In my theoretical model, citizens are fully rational: they know for sure that the politician lies to them. (And it is still optimal for the politician to lie, see Section 5!) It appears that the whole notion of a *lie* is not as clear cut as it might seem, so in Section 3 we discuss how to define the notion of a lie formally, and whether or not the senders actually *lie,* rather than *spin*, in most popular models of information manipulation. And, as appears, sometimes it does make sense to lie.

3 What Is a *Lie*?

It might seem as if it is a simple question with a straightforward answer, yet it is actually anything but. The formal model below presents an extreme case, in which some information is known to citizens with certainty. Mathematically, they know exactly the state of the world. Thus, when they are told that the state of the world is different, again with full certainty, they know that they are being lied to. However, in many models of information manipulation in a political context, the distinction is not that clear-cut.

For example, Callander and Wilkie (2007), following Banks (1990), calls a lie a violation of a campaign promise. That is, a policy choice that is different from the one promised during the campaign is considered a lie. Although undoubtedly justified, this is not the meaning we are interested in. In our discussion, a lie is an utterance that is inconsistent with the utterer's information partition.

To formally define a *lie,* we will need a standard definition of information partition (Osborne and Rubinstein, 1994). First, we define information function as follows: an information function for the set Ω of states is a function $\mathbb{P}$ that associates with every state $\omega \in \Omega$ a nonempty subset $\mathbb{P}(\omega) \subset \Omega$. Standardly, it is assumed that for every $\omega \in \Omega$, $\omega \in \mathbb{P}(\omega)$ and if some $\omega' \in \mathbb{P}(\omega)$, then $\mathbb{P}(\omega') = \mathbb{P}(\omega)$. These conditions guarantee that function $\mathbb{P}$ partitions

Ω.

Any subset of Ω is an event. Given partition $\mathbb{P}$, the knowledge function of the agent (sender) is given by $K(E) = \{\omega \in \Omega | \mathbb{P}(\omega) \subset E\}$, which is the set of all states in which the agent knows the event E. It is straightforward to show that $K(E) = \cup_{\omega:\mathbb{P}(\omega)\subset E}\mathbb{P}(\omega)$.

Now, let the set of all possible messages by the sender be the set of all possible events $M = \{E | E \subset \Omega\}$. Let E_0 be the information available to the agent. (That is, the agent knows that the true state of the world belongs to E_0.) Then message $m \in M$ is a *lie* if m is not a subset of $K(E_0)$. For example, consider a world with three possible states, $\Omega = \{A, B, C, \}$, and a sender who knows that the state of the world is A. Then, the message *"the state of the world is B"* is a lie, while the message *"the state of the world is either A, or B"* is not a lie. It is a spin.

The above definition is consistent with the generally accepted definition of a lie. For example, the *Stanford Encyclopedia of Philosophy* provides the following: "To lie is to make a believed-false statement to another person with the intention that the other person believe that statement to be true" (Mahon, 2016). This definition is also equivalent, with appropriate modifications, to the definition of lying in Sobel (2020). The reader is referred to this paper for an extensive discussion of lying in formal models of communication, and analysis of situations when signaling is entirely truthful.

Little (2023) surveys formal approaches that are used to model persuasion in politics. In all of them, the sender of information does not lie on the equilibrium path. For example, in Crawford and Sobel (1982), the celebrated model of strategic information transmission, the sender who has interests different from the receiver opts to partition the information into intervals rather than perfectly conveying it. However, the actual point on the real line (the "ground truth that the sender knows") always belongs to the interval that is reported to the receiver. That is, the information transmitted in Crawford and Sobel (1982) is a *spin*, rather than a lie. (Sobel, 2020, calls this a *deception*.)

Now, consider a standard model of Bayesian persuasion which is widely used in models of censorship, propaganda, and other forms of information manipulation. There are two states of the world, say $Good$ and Bad, and two symmetrically informed actors, a sender (a leader in a model of state propaganda) and a receiver (a citizen). The information is imperfect: they

have the same prior probability $\frac{1}{2}$ that the state of the world is *Good*. The receiver who acts upon getting an informative message from the sender wants to act differently in different states of the world (replace the leader), while the sender is interested in one specific action by the receiver regardless of the state of the world (to be retained no matter what). Optimal persuasion, from the sender's perspective, involves creating a mechanism that sends a message that the state is *Good* when the state is actually *Good*, and randomizes between messages *Good* and *Bad* when the state is *Bad* (Kamenica and Gentzkow, 2011). Again, regardless of the signal that citizens receive, it is a spin, not a lie: the signal *Good* should be properly interpreted as "with probability $\frac{1}{2}$, the state of the world is *Good*", which is a true statement. (Sobel, 2020, proves a far more general result on the need to use lies.)

In contrast to these classic environments – and other rational persuasion models surveyed in Little (2023) – in our model, the politician does lie to citizens.

4 Setup

There are two countries, the Domestic one (D) and the Foreign one (F). We are focusing on what is happening in the domestic country, where Citizens decide whether or not to retain Domestic Politician.

The domestic audience does not know what is happening in the other country, but assumes that politicians are all the same. Formally, the domestic audience assumes that the foreign country leadership is drawn from the same pool as the domestic one. For our results to hold, it is sufficient that there is some positive correlation between the pool characteristics (see the discussion in Section 6); assuming identical pools grossly simplifies the algebra. Although our analysis, technically, is an elementary exercise in Bayesian updating, even the simplest possible model is quite cumbersome.

Both Domestic Politician and Foreign Politician could be of two possible competence types, $s_D, s_F \in \{G, B\}$. Competence type is drawn from two possible distributions, $\Pr(s_D = G|\lambda) = \lambda$, where $\lambda \in \{\underline{\lambda}, \overline{\lambda}\}$ and $\underline{\lambda} < \overline{\lambda}$. The distribution is unknown and the common prior is $\Pr(\lambda = \overline{\lambda}) = \mu_0 \in (0, 1)$.

The leader has the same prior about own quality. This is a standard assumption: it reflects

the fact that leader's quality is relative to the circumstances. So, the leader's uncertainty about own quality is a result of the leader's very natural uncertainty about the future circumstances.

As it is standard in career-concerns political models, we assume that there are two periods and the main action happens when citizens decide whether or not to replace the incumbent leader after the first period. Our main focus will be on what happens when citizens know that the first-period outcome is bad ($s_D = B$). If the first-period outcome is good ($s_D = G$), then Citizens update their priors about the leader up; in this case, there is nothing to investigate.

So, the leader considers what to tell the citizens, $\widehat{s}_D \in \{G, B\}$, to persuade his subjects, who know that the first-period performance was bad, not to replace him. By replacing the current leader, the citizen gets a new draw s'_D such that $\Pr(s'_D = G|\lambda) = \lambda$ at the (expected) cost of $c > 0$. The citizen therefore gets in the second period s_D by retaining and $s'_D - c$ by replacing the current leader.

A good type is more likely to result in a good policy than a bad one; to simplify things, we will assume, without loss of generality, that a competent type results in a good outcome ($s_i = G$) in country $i \in \{D, F\}$ with probability 1, and the bad type results in a bad outcome ($s_i = B$) in country $i \in \{D, F\}$ with probability 1. Citizens' utility is normalized so that the expected second-period utility from the good type is 1 and from the bad type is 0.

In addition to the competence types, which are drawn independently from the same distribution, each country's political authorities belong, in the view of the domestic audience, to one of the two personality types, Honest (H) or Opportunistic (O). The Honest type always reports the true outcome. The Foreign Politician's opportunistic type says that the outcome is good. The opportunistic type of Domestic Politician is opportunistic.

Personality and competence types are drawn independently. From the domestic audience standpoint, the personality types $r_D, r_F \in \{O, H\}$ come from two possible distributions, $\Pr(r_i = H|\beta) = \beta$, where $\beta \in \{\underline{\beta}, \overline{\beta}\}$ and $\underline{\beta} < \overline{\beta}$. The distribution is unknown and $\Pr(\lambda = \overline{\beta}) = \gamma_0 \in (0, 1)$.

Only competence type matters for the second period, and is the reason why Citizens care

about retaining the politician. The equilibrium concept is perfect Bayesian; the timing is as follows.

Timing

1. Domestic Politician decides whether or not to hold the American Exhibition.
2. Citizens learn about the state of affairs in the domestic country.
3. Domestic Politician informs citizens about the state of affairs in their country.
4. If the American Exhibition is held, Citizens learn what Foreign Politician says.
5. Citizens decide whether or not to replace Domestic Politician.

5 Analysis

When deciding whether or not to hold the American Exhibition, Domestic Politician does not care about the possibility that the outcome is good, $s_D = G$, in which case he is retained anyway. What the leader cares about is the bad outcome, $s_D = B$. In this case, having Exhibition might result in either $\widehat{s}_F = B$, which will reinforce Citizens' beliefs that the politicians' pool is low-quality and there is no need to replace Domestic Politician, or that $\widehat{s}_F = G$, in which case his own $\widehat{s}_D = G$, while citizens know that $s_D = B$, will persuade citizens that Foreign Politician is lying. We will ultimately show that if Domestic Politician expects to be replaced, in the absence of Exhibition, whenever $s_D = B$, Exhibition might save him.

Suppose that citizens learned that $s_D = B$. This results in a new posterior that the competence pool is high-quality μ_1 :

$$\begin{aligned} \mu_1 &= \Pr\left(\lambda = \overline{\lambda} | s_D = B\right) \\ &= \frac{\mu_0}{\mu_0 + \frac{1-\lambda}{1-\overline{\lambda}}(1-\mu_0)}. \end{aligned}$$

Naturally, as the outcome is bad, the probability that the competence pool is high-quality goes down, $\mu_1 < \mu_0$. This is the effect familiar from Meirowitz and Tucker (2013): bad news

about the incumbent politician is bad news about the pool from which politicians are drawn, which makes citizens *less* eager to replace the incumbent.

Now, Citizens would prefer to retain Domestic Politician if and only if $\mu_1\overline{\lambda}+(1-\mu_1)\underline{\lambda}\leq c$. So, our primary focus is on the case $\mu_1\overline{\lambda}+(1-\mu_1)\underline{\lambda}>c$, in which the domestic audience's encounter with foreign information might save Domestic Politician.

In what follows, we consider whether or not it is optimal for the opportunistic type of Domestic Politician to lie to the domestic audience, i.e., say $\widehat{s}_D=G$, while citizens know that $s_D=B$. Recall that Citizens assume that the opportunistic Foreign Politician lies as well.

Let $\mu_2(\cdot,\cdot)$ denote the posterior as a function of $\widehat{s}_D$ and $\widehat{s}_F$. However, to avoid confusion, I would designate the first variable, which corresponds to what Domestic Politician says, as L (lie) or T (truth).

5.1 News from Abroad Are Good (Damn It!)

Suppose that Foreign Politician says $\widehat{s}_F=G$. This results in a higher Citizens' posterior about the competence pool, which is bad news for Domestic Politician. Still, he can reduce the impact of the unfavorable information by lying. This would increase the probability that Foreign Politician is of the lying type, which in turn results in a less likelihood that the foreign outcome is good, and a new, lower posterior about the competence pool.

If Domestic Politician says that things are good, $\widehat{s}_D=G$, while citizens know that they are actually bad, $s_D=B$, their posterior about the competence of their potential new draw is as follows.

$$\begin{aligned}\gamma_1(L,\widehat{s}_F &= G)=\Pr(\beta=\overline{\beta}|r_D=O,\widehat{s}_F=G)\\ &= \frac{\gamma_0}{\gamma_0+\frac{\left(1-\underline{\beta}\right)\left(\underline{\beta}\left(\mu_1\overline{\lambda}+(1-\mu_1)\underline{\lambda}\right)+1-\underline{\beta}\right)}{\left(1-\overline{\beta}\right)\left(\overline{\beta}\left(\mu_1\overline{\lambda}+(1-\mu_1)\underline{\lambda}\right)+1-\overline{\beta}\right)}(1-\gamma_0)}<\gamma_0,\end{aligned}$$

where we used

$$\begin{aligned}\Pr\left(r_D=O,\widehat{s}_F=G|\beta=\overline{\beta}\right) &= \left(1-\overline{\beta}\right)\left(\overline{\beta}\left(\mu_1\overline{\lambda}+(1-\mu_1)\underline{\lambda}\right)+1-\overline{\beta}\right),\\ \Pr\left(r_D=O,\widehat{s}_F=G|\beta=\underline{\beta}\right) &= \left(1-\underline{\beta}\right)\left(\underline{\beta}\left(\mu_1\overline{\lambda}+(1-\mu_1)\underline{\lambda}\right)+1-\underline{\beta}\right).\end{aligned}$$

Using the new posterior $\gamma_1(L,\widehat{s}_F)$ about the personality pool, we calculate the probability of Foreign Politician reporting a good outcome conditional on the quality of the competence pool:

$$\begin{aligned}
\Pr\left(\widehat{s}_F = G|\lambda=\overline{\lambda}\right) &= \Pr\left(s_F = G|\lambda=\overline{\lambda}\right) + \Pr(s_F = B|\lambda=\overline{\lambda}) \times \Pr(r_F = O|r_D = O) \\
&= \overline{\lambda} + \left(1-\overline{\lambda}\right)\left(\gamma_1(L,G)(1-\overline{\beta}) + (1-\gamma_1(L,G))(1-\underline{\beta})\right). \\
\Pr\left(\widehat{s}_F = G|\lambda=\underline{\lambda}\right) &= \underline{\lambda} + \left(1-\underline{\lambda}\right)\left(\gamma_1(L,G)(1-\overline{\beta}) + (1-\gamma_1(L,G))(1-\underline{\beta})\right),
\end{aligned}$$

Now, we have

$$\mu_2(L,G) = \frac{\mu_1}{\mu_1 + \frac{\underline{\lambda}+\left(1-\underline{\lambda}\right)\left(\gamma_1(L,G)(1-\overline{\beta})+(1-\gamma_1(L,G))(1-\underline{\beta})\right)}{\overline{\lambda}+\left(1-\overline{\lambda}\right)\left(\gamma_1(L,G)(1-\overline{\beta})+(1-\gamma_1(L,G))(1-\underline{\beta})\right)}(1-\mu_1)} > \mu_1.$$

What would happen if the domestic politician, instead of lying, had told the truth $\widehat{s}_D = B$? In this case, Citizens know with certainty that $r_D = H$, because they assume that, as prescribed by the equilibrium strategy, $\widehat{s}_D^O(B) = G$. Their posterior about the competence of a potential replacement is as follows.

$$\begin{aligned}
\gamma_1(T,\widehat{s}_F = G) &= \Pr(\beta=\overline{\beta}|r_D = H) \\
&= \frac{\gamma_0}{\gamma_0 + \frac{\overline{\beta}}{\underline{\beta}}(1-\gamma_0)} > \gamma_0.
\end{aligned}$$

Using the Citizens' posterior about the honesty of the politicians' pool, we can calculate the Citizens' posterior about the politicians' competence.

$$\begin{aligned}
\mu_2(T,G) &= \Pr\left(\lambda=\overline{\lambda}|\widehat{s}_F = G\right) \\
&= \frac{\mu_1}{\mu_1 + \frac{\underline{\lambda}+\left(1-\underline{\lambda}\right)(1-\gamma_1(T,G))}{\overline{\lambda}+\left(1-\overline{\lambda}\right)(1-\gamma_1(T,G))}(1-\mu_1)}.
\end{aligned}$$

where we used

$$\begin{aligned}
\Pr\left(\widehat{s}_F = G|\lambda=\overline{\lambda}\right) &= \Pr\left(s_F = B|\lambda=\overline{\lambda}\right) \times \Pr(r_F = O|r_D = H\}) + \Pr\left(s_F = G|\lambda=\overline{\lambda}\right) \\
&= \left(1-\overline{\lambda}\right)\left(\gamma_1(T,G)(1-\overline{\beta}) + (1-\gamma_1(T,G))(1-\underline{\beta})\right) + \overline{\lambda}. \\
\Pr\left(\widehat{s}_F = G|\lambda=\underline{\lambda}\right) &= \left(1-\underline{\lambda}\right)\left(\gamma_1(T,G)(1-\overline{\beta}) + (1-\gamma_1(T,G))(1-\underline{\beta})\right) + \underline{\lambda}. \\
\Pr(r_F = O|r_D = H) &= \gamma_1(T,G)(1-\overline{\beta}) + (1-\gamma_1(T,G))(1-\underline{\beta}).
\end{aligned}$$

Now we need to compare $\mu_2(L,G)$ and $\mu_2(T,G)$. Observe that $\mu_2(L,G) < \mu_2(T,G)$ if and only if

$$\frac{\underline{\lambda}+(1-\underline{\lambda})\left(\gamma_1(L,G)(1-\overline{\beta})+(1-\gamma_1(L,G))(1-\underline{\beta})\right)}{\overline{\lambda}+\left(1-\overline{\lambda}\right)\left(\gamma_1(L,G)(1-\overline{\beta})+(1-\gamma_1(L,G))(1-\underline{\beta})\right)} > \frac{\underline{\lambda}+(1-\underline{\lambda})\left(\gamma_1(T,G)(1-\overline{\beta})+(1-\gamma_1(T,G))(1-\underline{\beta})\right)}{\overline{\lambda}+\left(1-\overline{\lambda}\right)\left(\gamma_1(T,G)(1-\overline{\beta})+(1-\gamma_1(T,G))(1-\underline{\beta})\right)}.$$

What we need is to observe that the function $f(x)=\frac{a+(1-a)x}{b+(1-b)x}$ is increasing in x when $a<b$. Thus, it is sufficient to show that

$$\gamma_1(L,G)(1-\overline{\beta})+(1-\gamma_1(L,G))(1-\underline{\beta}) > \gamma_1(T,G)(1-\overline{\beta})+(1-\gamma_1(T,G))(1-\underline{\beta}),$$

which follows from the observation that $\gamma_1(L,G)<\gamma_0<\gamma_1(T,G)$ and $1-\overline{\beta}<1-\underline{\beta}$.

So, we demonstrated that

$$\mu_2(L,G) < \mu_2(T,G),$$

which means that *if Foreign Politician says $\widehat{s}_F=G$, for Domestic Politician it is better to lie, $\widehat{s}_D=G$, when citizens know that $s_D=B$*. When telling an obvious lie to his audience, the Domestic Politician forces them to lower the probability that the Foreign Politician tells the truth and, consequently, lower their posterior of the potential replacement even further. Effectively, lying about what is easily verifiable, the leader makes citizens worsen their opinion about the whole replacement pool.

Note that if $\mu_2>\mu_1$, then $\mu_2\overline{\lambda}+(1-\mu_2)\underline{\lambda}>\mu_1\overline{\lambda}+(1-\mu_1)\underline{\lambda}$, so, as $\mu_1\overline{\lambda}+(1-\mu_1)\underline{\lambda}>c$, the voters, upon making all these updates, will replace Domestic Politician. That is, if bad news on their own result in ousting Domestic Politician, then, if foreign news are good, American Exhibition does not save the Domestic Politician.

5.2 Foreign News Are, Thanks God, Bad

Now, suppose that Foreign Politician says $\widehat{s}_F=B$. What happens to $\Pr(\lambda=\overline{\lambda})$ when (domestic) citizens observe $\widehat{s}_F=B$? Again, we assume that $\widehat{s}_D=G$ and $s_D=B$ in the next calculation.

If Foreign Politician says $\widehat{s}_F=B$, then it is the honest type, which means that the situation is really bad abroad, $s_F=B$. In this case, it does not matter what the Domestic Politician says,

as whatever is revealed about the personality type will not be used to update the information on s_F, which is known for sure. That is, $\mu_2(L,B) = \mu_2(T,B)$.

So, for any $X \in \{L,T\}$,

$$\begin{aligned}\mu_2(X,B) &= \Pr\left(\lambda = \overline{\lambda} | s_F = B\right) \\ &= \frac{\mu_1}{\mu_1 + \frac{1-\underline{\lambda}}{1-\overline{\lambda}}(1-\mu_1)} < \mu_1.\end{aligned}$$

In other words, when foreign news, as shown at the exhibition, are bad, then Citizens posterior about the politicians competence goes down, which is welcome news for Domestic Politician. Bad things happening abroad is a sign that even if things are bad domestically, it is better not to replace Domestic Politicians. It is not his fault that things went badly – it is just the sad nature of our world.

5.3 Does the American Exhibition Make Sense?

Next, we show that for Domestic Politician it does make sense to hold the American Exhibition, an event, at which the citizens have a chance to get some information about the quality of life abroad and, by inference, about the quality of the politicians' pool.

So far, we demonstrated that

$$\mu_2\left(L, \widehat{s}_F\right) \leq \mu_2\left(T, \widehat{s}_F\right) \text{ for any } \widehat{s}_F \in \{G,B\}.$$

At the same time,

$$\begin{aligned}\mu_2(L,G) &> \mu_1, \\ \mu_2(L,B) &< \mu_1.\end{aligned}$$

If the replacement cost c is a fixed parameter, then $\mu_2(L,B) < \mu_1$ implies, for a range of parameters, that Domestic Politician will choose to have the Exhibition in equilibrium. However, in this case, it does not matter whether or not he lies if $\widehat{s}_F = G$, as he is doomed anyway. However, if the replacement cost is a random variable with the expected value of c, then lying makes sense if both $\mu_1\overline{\lambda} + (1-\mu_1)\underline{\lambda} > c$ and $E_{\widehat{s}_F \in \{G,B\}}\left[\mu_2\left(L,\widehat{s}_F\right)\overline{\lambda} + (1-\mu_2\left(L,\widehat{s}_F\right))\underline{\lambda}\right] < c$ are

true. If this combination of parameters is possible, then Domestic Politician has incentives to organize the Exhibition, which, in expectation, helps him to stay in power.

Let us write down the expected payoff of organizing the American Exhibition:

$$\begin{aligned} E_{\widehat{s}_F \in \{G,B\}} \mu_2\left(L, \widehat{s}_F\right) &= \mu_2\left(L,G\right) \Pr\left(\widehat{s}_F = G\right) + \mu_2\left(L,B\right) \Pr\left(\widehat{s}_F = B\right) \\ &= \frac{\mu_1}{\mu_1 + \frac{\underline{\lambda}+\left(1-\underline{\lambda}\right)\left(\gamma_1\left(1-\overline{\beta}\right)+\left(1-\gamma_1\right)\left(1-\underline{\beta}\right)\right)}{\overline{\lambda}+\left(1-\overline{\lambda}\right)\left(\gamma_1\left(1-\overline{\beta}\right)+\left(1-\gamma_1\right)\left(1-\underline{\beta}\right)\right)}\left(1-\mu_1\right)} \Pr\left(\widehat{s}_F = G\right) + \frac{\mu_1}{\mu_1 + \frac{1-\underline{\lambda}}{1-\overline{\lambda}}\left(1-\mu_1\right)} \Pr\left(\widehat{s}_F = B\right), \end{aligned}$$

where

$$\gamma_1 = \gamma_1(L,G) = \frac{\gamma_0}{\gamma_0 + \frac{\left(1-\underline{\beta}\right)\left(\underline{\beta}\left(\mu_1\overline{\lambda}+\left(1-\mu_1\right)\underline{\lambda}\right)+1-\underline{\beta}\right)}{\left(1-\overline{\beta}\right)\left(\overline{\beta}\left(\mu_1\overline{\lambda}+\left(1-\mu_1\right)\underline{\lambda}\right)+1-\overline{\beta}\right)}\left(1-\gamma_0\right)}.$$

Direct calculations show that there exist thresholds $0 < \underline{\beta}^* < \overline{\beta}^* < 1$ such that for any $\underline{\beta} \in [0, \underline{\beta}^*]$ and any $\overline{\beta} \in [\overline{\beta}^*, 1]$, $E_{\widehat{s}_F \in \{G,B\}} \mu_2\left(L, \widehat{s}_F\right) < \mu_1$, so that there is a range of parameters for which holding the American Exhibition does make sense for Domestic Politician.

In these intervals, whatever makes $\Pr\left(\widehat{s}_F = G\right)$ smaller increases the range of parameters for which the Exhibition makes sense. This includes a lower prior on the chance to draw a competent politician, μ_0, and a higher prior on the chance to draw an honest one, γ_0.

6 Discussion

In this section, we briefly discuss the assumptions and implications of the model, including a theory of *whataboutism*, an old Soviet propaganda strategy that has become recently popular around the world.

6.1 What Dictators Say About Foreign Governments

An important underlying assumption of our model is that domestic and foreign politicians are drawn from the same general pool. Assuming an identical pool might be a crude simplification, but the theory works if there is a mere correlation between the composition of pools of politicians in two countries. Did citizens of the Soviet Union or Communist China think that American politicians are similar to their domestic ones? There is plenty of evidence that

it was indeed so, or more precisely that the Soviet and Chinese leaders thought that they did. Otherwise, what was the point of persuading domestic citizens that things are going badly in other countries? Authoritarian regimes massively do just that.

Drawing on experience of many authoritarian governments, Carter and Carter (2023) document that authoritarian regimes love to tell their citizens how bad other governments are. Coupled with the constant focus of authoritarian governments on shutting down all alternative channels of information (Dimitrov, 2023; Harrison, 2023), this creates the environment analyzed in our model. Belmonte and Rochlitz (2020) describe recent efforts by leaders in Russia, Myanmar, Pakistan, and Egypt to portray their authoritarian rule as protection against chaos, as exemplified by the experience of other countries. Analyzing more than 100,000 articles over 13 years, Field et al. (2018) established that the state-controlled media follows "a strategy of distraction": articles mention the U.S., typically in a negative light, more frequently in the month directly following an economic downturn in Russia. Ji and Liu (2022) used a corpus of 28,000 news articles from 2003 to 2015 to show that domestic economic factors were the main determinant of short-term bias in the coverage of foreign news in Chinese media. Persuading domestic citizens that things go badly abroad makes sense, from the regime perspective, only if citizens perceive foreign politicians coming from the same, or at least a similar, pool.

6.2 Politicians in Both Countries Lying

In our model, the domestic autocrat was opportunistically deciding what to say, while the foreign politician, presumably from a democratic country, mechanically says that everything is good when she is opportunistic. A natural question is what happens if the foreign country is fully symmetric and the opportunistic foreign politician might also lie when it suits her. In fact, at the cost of cumbersome algebra, the model naturally extends to this case as well. Furthermore, the actions of the two leaders will be mutually re-enforcing. Each of the incumbent leaders will benefit from the citizens' perception that all politicians are liars and things go badly in other countries. The effect should be less pronounced if one country is a democracy: in a democracy, citizens have access to more information, including

information about what is going on abroad. With two authoritarian regimes, showing how bad things are in the other country might strengthen their respective positions domestically.

6.3 Political Campaigns in a Democracy

Although the main focus of this paper is on authoritarian government's propaganda, the formal model can be applied to study phenomena of democratic politics as well. Suppose in a political debate, on stage, Candidate A produces some devastating, but hard-to-verify, fact about Candidate B. Now, Candidate B knows that what Candidate A says is true and is, indeed, devastating if voters know it. The model suggests a way for candidate B to respond strategically. Suppose that Candidate B, in response, utters an easy-to-verify lie – a wild accusation, for example, so that the voters immediately know Candidate B is lying. This, per our formal model, leads to voters' lowering their posterior on the politicians' pool honesty. All politicians lie, which makes the devastating message of Candidate A less believable. Exactly as in our model, the easy-to-verify lie by Candidate B helps to diminish the impact, in voters' eyes, of the information revealed by Candidate A, even if this information is likely to be true.

There is a formal literature on positive vs. negative campaigning, in which a positive campaign is enhancing the politician's own reputation, while a negative campaign damages the opponent's (see, e.g., Polborn and Yi, 2004; Bernhardt and Ghosh, 2020). This definition of positive vs. negative campaigning is classic and widely used in the political science literature because it provides a clear dichotomy (Lau and Rovner, 2009). Our model shows that this definition, theoretically, is not that clear cut: providing information about yourself might be damaging to the opponent in the eyes of voters. This, of course, does not mean that this effect dominates other effects of information manipulation in informational campaigns (DellaVigna and Gentzkow, 2010).

6.4 Whataboutism

Our approach provides a way to study, in a formal model, another common element of modern propaganda, the *whataboutism*. The Merrian-Webster dictionary describes whataboutism as follows: "it's essentially a reversal of accusation, arguing that an opponent is guilty of an

offense just as egregious or worse than what the original party was accused of doing, however unconnected the offenses may be."[6] Using our model to study whataboutism requires minimal relabeling. The central element of the mechanism here is that by altering the posterior about the opponent's trustworthiness, the propagandist forces the receiver to change the posterior about the main issue. The encyclopedia article proceeds to explain that "The association of whataboutism with the Soviet Union began during the Cold War. As the regimes of Josef Stalin and his successors were criticized by the West for human rights atrocities, the Soviet propaganda machine would be ready with a comeback alleging atrocities of equal reprehensibility for which the West was guilty."

[6] https://www.merriam-webster.com/wordplay/whataboutism-origin-meaning.

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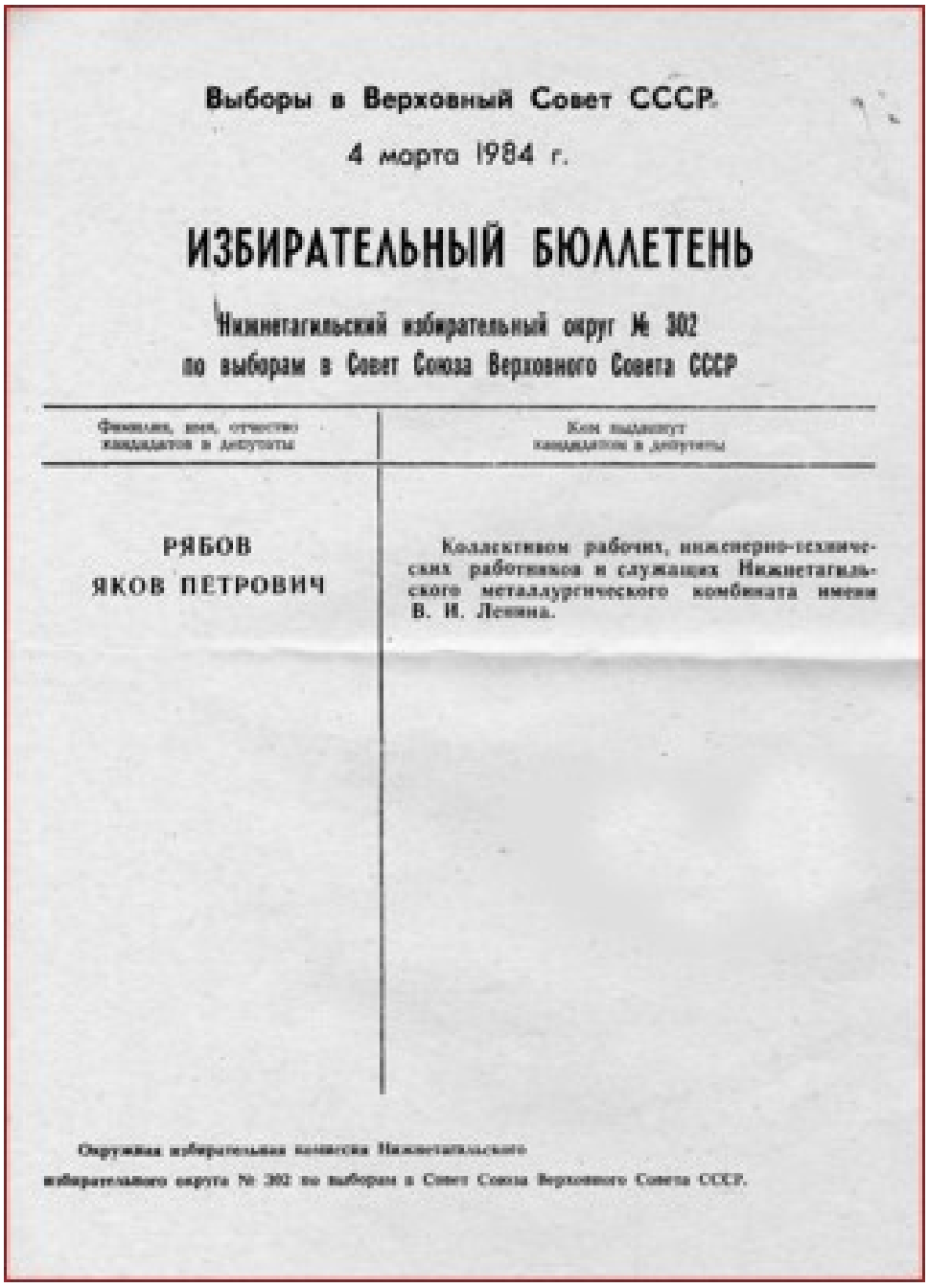
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Выборы в Верховный Совет СССР

4 марта 1984 г.

ИЗБИРАТЕЛЬНЫЙ БЮЛЛЕТЕНЬ

Нижнетагильский избирательный округ № 302
по выборам в Совет Союза Верховного Совета СССР

Фамилия, имя, отчество кандидатов в депутаты	Кем выдвинут кандидатом в депутаты
РЯБОВ ЯКОВ ПЕТРОВИЧ	Коллективом рабочих, инженерно-технических работников и служащих Нижнетагильского металлургического комбината имени В. И. Ленина.

Окружная избирательная комиссия Нижнетагильского избирательного округа № 302 по выборам в Совет Союза Верховного Совета СССР.

Figure 1. Soviet Election Ballot in 1984.