Games and Economic Behavior 102 (2017) 224–232

Contents lists available at ScienceDirect

Games and Economic Behavior

www.elsevier.com/locate/geb

Propaganda and credulity ☆

Andrew T. Little

Department of Government, Cornell University, United States

ARTICLE INFO

Article history:
Received 13 April 2016
Available online 28 December 2016

JEL classification:
D83

Keywords:
Political economy
Propaganda
Authoritarian politics

ABSTRACT

I develop a theory of propaganda which affects mass *behavior* without necessarily affecting mass *beliefs*. A group of citizens observe a signal of their government's performance, which is upwardly inflated by propaganda. Citizens want to support the government if it performs well and if others are supportive (i.e., to *coordinate*). Some citizens are unaware of the propaganda ("credulous"). Because of the coordination motive, the non-credulous still respond to propaganda, and when the coordination motive dominates they perfectly mimic the actions of the credulous. So, all can act as if they believe the government's lies even though most do not. The government benefits from this responsiveness to manipulation since it leads to a more compliant citizenry, but uses more propaganda precisely when citizens are less responsive.

Politicians lie, and coerce others to lie on their behalf. These lies take many forms, from rewriting the history taught in schools, to preventing the media from reporting on policy failures, to relatively innocuous spinning of the economy's performance in press conferences.

The pervasiveness of political actors lying or manipulating information more generally may seem natural. However, the general acceptance of lying's central role in politics itself poses a puzzle from a game-theoretic perspective: if the "audience" for political information – which could be other elites, party members, or citizens more broadly – know they are being lied to and adjust their beliefs accordingly, why go through the costly and potentially embarrassing effort of distorting information?

Scholars have proposed several explanations for why governments attempt to (and sometimes succeed at) manipulating information to an audience which is strategically sophisticated. For example, manipulation can act as a signal that the government is capable of doing so (Simpser, 2013; Huang, 2015), or render citizens less informed and hence less likely to take risky anti-government action (Gehlbach and Sonin, 2014; Shadmehr and Bernhardt, 2015; Gehlbach and Simpser, 2015; Hollyer et al., 2015). Even if the audience for manipulated information is not fooled, in models with a "career concerns" type information structure (Holmstrom, 1999), governments have to lie to keep up with expectations for and avoid seeming weaker than they truly are (Little, 2012, 2015).[1]

☆ Many thanks to Avi Acharya, Sarah Bouchat, Alex Debs, Tiberiu Dragu, Oendrilla Dube, Florian Foos, Scott Gehlbach, Florian Hollenbach, Carlo Horz, Navin Kartik, Adam Levine, Peter Lorentzen, Konstantinos Matakos, Tom Pepinsky, Adam Przeworski, Konstantin Sonin, Francesco Squintani, Jeremy Wallace, Jessica Weiss, Galina Zudenkova, audience members at EPSA 2015, APSA 2015, SPSA 2016, MPSA 2016, NYU, Vanderbilt, Harvard, and Wisconsin, several anonymous referees, and the editors of Games and Economic Behavior for comments and discussion. All remaining errors are mine.

E-mail address: andrew.little@cornell.edu.

[1] These mechanisms are not mutually exclusive: for example, a common combination blends private information with Bayesian Persuasion-like dynamics, where those with private information indicating they are less strong manipulate more to "pool" with the stronger types and hide their weakness (Edmond, 2013; Lorentzen, 2014; Petrova and Zudenkova, 2015).

http://dx.doi.org/10.1016/j.geb.2016.12.006
0899-8256/

However, a wide variety of empirical results from economics, psychology, and political science indicate that some if not most people *don't* fully adjust for information manipulation even when standard solution concepts indicate that they should. Lab experiments consistently find that subjects tend to believe what others say, even if the sender has transparent incentives to misrepresent their information (Cai and Wang, 2006; Patty and Weber, 2007; Wang et al., 2010). Observational empirical studies of propaganda and information manipulation also tend to find a large influence on the beliefs and behavior of the target audience (e.g., Enikolopov et al., 2011; Yanagizawa-Drott, 2014; Adena et al., 2015).

Motivated by these results, I explore the consequences of a simpler explanation: politicians lie because some people believe them. While those who believe whatever the government tells them are tautologically responsive to propaganda, their presence has powerful effects on the behavior of those who *are* aware that they are being lied to, as well as those doing the lying.

I analyze a model where citizens observe a public signal of the government's performance, using a notion of credulity similar to that in Kartik et al. (2007).[2] The government chooses a (hidden) level of propaganda, which inflates this signal, suggesting the government is performing better than they truly are. I formalize "partially credulous" citizens as those who believe the government may not manipulate information when it does. "Fully credulous" citizens incorrectly believe it is impossible that the government manipulates information. All citizens behave optimally given their beliefs and knowledge about the existence of credulous citizens.

After observing the signal, citizens choose how much to support the government. Following Kuran (1997), two incentives drive this decision: citizens want to support governments that perform well, and want to pick a level of support in line with what others choose.[3] This latter *coordination motive* can drive even those who know the government is lying to behave as if they accept the signal as true because they know the credulous citizens will be influenced by propaganda.

The first main results of the paper are that fully rational and informed citizens are always at least partially responsive to propaganda, and when the coordination motive dominates, the behavior of the informed types approaches that of the credulous types.[4] So, propaganda can successfully influence mass *behavior* even without affecting most citizens' *beliefs*. The second main set of results examine the government's equilibrium choice of propaganda given the citizen behavior. The government wants the citizens' support, but pays an exogenous cost to manipulate. Surprisingly, the government tends to pick a high level of propaganda precisely when it is ineffective. So, when observing people behave as if they believe government propaganda, we can neither conclude that they are truly convinced nor that the government is manipulating their behavior in an optimal fashion.

1. The model

The game is played among a government and a continuum of citizens with mass 1.

1.1. Information and sequence of moves

There is a fundamental government "performance" (or "strength") parameter $\theta \in \mathbb{R}$. The government and citizens share a common prior belief on θ which is distributed according to a density f with full support on $\mathbb{R}$.

The government also has a type $\omega \in \{0, 1\}$, which indicates whether they are willing and able to manipulate a signal of their performance. The government learns ω (but not θ), and then chooses a manipulation level $m \geq 0$.[5]

Next, all citizens observe a public signal of θ, given by:

$$s = \theta + \omega m.$$

Proportion $1 - \epsilon$ of the population also directly observe ω (the "informed types"), while $\epsilon > 0$ do not (the "uninformed", later "credulous" types). Let the uninformed type prior belief about the probability that the government can manipulate be $q \in [0, 1]$. Both ϵ and q are common knowledge: i.e., the uninformed types are aware that some fraction of the population has better information than they do, and the informed types know the probability that the uninformed types assign to the possibility of manipulation.

After observing the signal, citizens simultaneously take an action $a \in \mathbb{R}$. The government wants citizen to take "high" actions, so larger values of a could correspond to speaking positively and publicly about the government, enthusiastically participating in pro-government rallies, working hard as a party member, etc. Equivalently, $-a$ could represent the degree of anti-government activity taken.

[2] This paper and related work (e.g., Ottaviani and Squintani, 2006; Chen, 2011) study cheap talk models where the receiver sometimes accepts the sender's message at face value, and the audience for (manipulated) information is a single actor or a group of receivers whose actions are independent of each other. In addition to the application to propaganda rather than general communication, the central mechanism driving the results here is interactions among citizens with a motive to coordinate with each other.

[3] Kuran (1997) primarily focuses on small changes in the distribution of preferences can lead to drastic differences in the ability of citizens to coordinate (or not) against the status quo. The model here always exhibits a unique equilibrium, making a sharper prediction that when coordination motives are strong, herding always occurs on the behavior of the least informed citizens.

[4] See Haltiwanger and Waldman (1985) for a similar argument in the context of macroeconomics.

[5] See the online Appendix B for a discussion of what happens if the government knows θ.