On repression and its effectiveness

Tiberiu Dragu
Department of Politics, New York University, USA

Abstract
Do electoral incentives to stop a terrorist attack before the next election induce democratic governments to undertake ineffective counterterrorism policies? This article shows that short-sighted electoral motivations are not a sufficient explanation for why governments engage in counterproductive repression when responding to electoral pressures to safeguard security. It develops a game-theoretic model to show that limitations on observability of counterterrorism activities are an important factor for understanding why electoral pressures might induce democratic governments to choose ineffective security policies. The model also allows us to systematically investigate the conditions under which repressive counterterrorism is more likely to aggravate the terrorist threat, and has empirical and policy implications regarding the relationship between repression and its (in)effectiveness when democratic societies strive to counter the threat of terrorism.

Keywords
Counterterrorism; electoral incentives; overreaction; repression; terrorism

1. Introduction

When faced with the threat of political violence and terrorism, democratic governments often respond by displays of force and focus their coercive efforts on the political, ethnic, or religious communities perceived to be associated with the security threat. American reactions to the threat of Al Qaeda terrorism illustrate this tendency. In the aftermath of 9/11, the US government undertook scores of repressive policies, ranging from ethnic profiling to increased restrictions on immigration, to increased surveillance and preventive detention, to military interventions in Afghanistan and Iraq and drone strikes in Pakistan, Yemen, and Somalia.

Corresponding author:
Tiberiu Dragu, Department of Politics, New York University, 19 West 4th St., New York, NY 10012, USA.
Email: tiberiu.dragu@nyu.edu

The projection of force against those communities from which terrorists might emerge seems perhaps unavoidable, especially after a terrorist attack, when governments face extraordinary public pressure to safeguard security and when governments lack information to sort out potential terrorists from the larger communities in which they might hide. Citizens expect to be protected and have plenty of channels to make their demands heard in a democratic society. They want to see expeditious and forceful actions taken, especially in the aftermath of major terrorist attacks, and democratic governments frequently tend to give way to this public pressure. Equally important, elected officials need to insure against potential political and electoral costs should they refuse to undertake draconic antiterrorism measures when bombs go off (Cronin, 2009; Ignatieff, 2004).

Scholars have argued that when democratic governments react to such popular pressures and resort to repression, such a strategy can be counterproductive (Crenshaw, 2010; Richardson, 2007; Wilkinson, 2006). While repressive measures can have security benefits, they can also undermine the legitimacy of the counterterrorism effort in the eyes of the communities that terrorists claim to represent, which could strengthen the terrorist cause (Fromkin, 1975; Lake, 2002; Wilkinson, 2006). Indeed scholars have shown empirically that coercive measures have often exacerbated the potential for further terrorist violence (Benmelech et al., 2015; Daxecker and Hess, 2013; Dugan and Chenoweth, 2012; LaFree et al., 2009).

That electoral pressures are an important determinant of why democratic governments often overreact with ineffective security measures has long been recognized in the scholarship on terrorism. The underlying view is that democratic governments engage in counterproductive repression because they have shortsighted incentives to respond to public demands to forcefully tackle the terrorist threat, and such electoral motivations preclude governments from properly weighing the consequences of repressive actions (Crenshaw, 2010; Cronin, 2009; Donohue, 2008; Heymann, 2003; Ignatieff, 2004). However, this literature has not seriously scrutinized the mechanism by which electoral pressures to fight terrorism induce democratic governments to adopt counterproductive repressive policies. Missing from this scholarship is a theoretical analysis of why democratic governments undertake suboptimal counterterrorism policies because of electoral incentives to respond to public demands for more security. The lack of such analysis, in turn, precludes us from unpacking the mechanism and from systematically investigating the conditions under which repressive policies can aggravate the very threat they are designed to counter, which is a necessary step to derive empirical and policy implications about the relationship between repression and its (in)effectiveness when democratic polities strive to counter the threat of terrorism. Understanding why electoral pressures induce government overreaction is also important, as democratic societies are particularly vulnerable to a strategy of provocation (Carter, 2016; Lake, 2002) as elected officials more often than not succumb to popular pressures to be tough on terrorism, pressures undoubtedly exacerbated by media sensationalism and coverage of terrorist attacks (Fromkin, 1975; Parker, 2015).[1]

In this article, I investigate the mechanism and conditions under which a democratic government engages in counterproductive repression when the electorate wants increased security. To this end, I develop a game-theoretic model of an interaction among a representative citizen, a government (elected), and the community that is perceived to be

associated with the terrorist threat. In this framework, repressive counterterrorism has both security benefits and costs: a larger repressive action directly decreases the likelihood of terrorist attacks, but it also decreases the community's incentives to support terrorism prevention, which can indirectly aggravate the terrorist threat. The government understands the trade-offs of repressive action and has electoral incentives to choose security policies to prevent a terrorist attack before the next election.

The game-theoretic analysis allows us to unpack the mechanism by which electoral pressures to do more on security induce a democratic government to choose ineffective counterterrorism measures. It shows that shortsighted electoral motivations are not a sufficient explanation for why the government engages in counterproductive repression when responding to electoral pressures to safeguard security. For practical and strategic reasons, counterterrorism operations require some secrecy, and these inherent limitations on observability of counterterrorism activities preclude the government from credibly restraining its repressive activity to a security-optimal level when the electorate wants increased security. If counterterrorism activities were perfectly observable, in equilibrium, the government would not respond to electoral pressures to provide more security with counterproductive repression, even if the government had shortsighted electoral motivations when choosing counterterrorism policies. Hence, limitations on the observability of counterterrorism activities are necessary for understanding why electoral pressures might induce democratic governments to choose ineffective security policies. For the same reason, the government might also engage in counterproductive repression if the lethality of terrorism is higher, if the cost of counterterrorism operations is lower, and more generally, if the government has increased motivations to fight terrorism. The model underscores a general mechanism by which democratic governments resort to counterproductive repression whenever they have augmented incentives to deliver security, a mechanism that could be relevant for understanding the logic of counterproductive repression in the context of other forms of contentious politics.

The analysis also allows us to systematically investigate the conditions under which a democratic government is more likely to adopt inefficient repressive policies, owing to public demands for security. Whether electoral pressures to forcefully tackle the terrorist threat induce the government to choose counterproductive policies depends on the government's stake in preventing terrorist attacks, the government's cost of engaging in repressive activity, and the community's stake in preventing terrorist attacks, among other factors. These results can have a variety of substantive interpretations, which allow us to derive empirical and policy implications about the relationship between repressive counterterrorism and its (in)effectiveness. For instance, they suggest that democratic governments are more likely to engage in counterproductive repression in response to electoral pressures when terrorism is a more salient public issue and when governments face fewer legal restrictions on their coercive powers.

2. Democratic governments and terrorism prevention

When confronted with the threat of terrorism, democratic governments have often responded with indiscriminate repression and focused their coercive measures on the communities from which the terrorist threat is perceived to emerge (Cronin, 2009). Repressive activities can have security benefits. For instance, the use of military force in

suspected communities might kill potential terrorists, disrupt ongoing plots, and destroy the infrastructure and the logistic networks of terrorist groups; increased surveillance of the populations in which terrorists might hide or coercive interrogations of suspected terrorists might allegedly provide useful information about the activities of terrorist organizations; preventive roundups and administrative detentions might disrupt the support infrastructure of terrorist groups, making it more difficult to carry out terrorist violence.

Terrorism prevention though is not only a function of the state response, repressive or otherwise. Terrorist groups cannot sustain a violent campaign without passive or active support from the communities they claim to represent (Richardson, 2007). This implies that the communities in which terrorists might hide, seek support, and plot attacks can reduce the terrorist threat in myriad ways. For example, community members can discourage fellow members from providing active and passive support to terrorist groups, thus reducing the terrorists' ability to operate and plan attacks. They can also actively discourage extremism and violent activities, thus increasing the costs of terrorism by making it a less acceptable activity. Furthermore, community members can provide information to the government about suspicious activities as well as about individuals who might be attracted to radical ideas, connected to terrorists, or actively planning a terrorist attack (Wilkinson, 2006).

At the same time, indiscriminate repression can undermine the legitimacy of the counterterrorism effort in the eyes of the targeted communities, rendering them far less likely to support terrorism prevention (Bueno de Mesquita and Dickson, 2007; Cole, 2005; Kydd and Walter, 2006; Rosendorff and Sandler, 2004; Sanchez-Cuenca and de la Calle, 2009). For example, the use of military force can cause collateral damage and loss of innocent lives in the targeted populations, creating anger and resentment in the broader community, which can strengthen the terrorist cause. Similarly, the terrorist cause can be promoted by coercive measures that impose burdens and obligations mostly on non-citizens and minorities, such as preventive detentions, coercive interrogations, or ethnic profiling, because such policies create a perception that democratic governments have double standards (Huq et al., 2011; Tyler and Huq, 2010).

Repressive counterterrorism can have both benefits and security costs, and any conclusion about its net effect depends on whether, in practice, governments resort to a level of repression that has more costs than benefits (Siegel, 2011a,b). In this context, scholars have shown empirically that democratic governments have engaged in counterproductive repression. This finding has been documented in cross-sectional analyses regarding the effectiveness of various repressive tactics (Daxecker, 2015; Daxecker and Hess, 2013; Enders and Sandler, 1993; Walsh and Piazza, 2010) and in quantitative analyses regarding the security consequences of counterterrorism measures in Israel, United Kingdom, and Spain (Benmelech et al., 2015; Dugan and Chenoweth, 2012; Gil-Alana and Barros, 2010; LaFree et al., 2009).

Why do public pressures induce democratic governments to engage in counterproductive repression? A common answer to this question is that democratic governments have electoral incentives to respond to public demands to forcefully tackle the terrorist threat, and these political motivations to safeguard security before the next election induce a shortsighted perspective when choosing a counterterrorism response. For example, (Richardson, 2007, p. 101) argues:

> The competitive nature of Western democracies and the short-term thinking that is encouraged by the electoral cycle combine to ensure that governments react forcefully and quickly. Speed and force are both critical elements in a successful military campaign; it is far less likely that they are necessary ingredients of a successful counterterrorism policy.

Also, Crenshaw (2010, p. 2) notes that '[f]ears of failing to prevent a disastrous terrorist attack causing a large loss of civilian lives may lead policymakers to take a shortsighted and overconfident view of the ability of robust security measures to prevent terrorism.' Similarly, (Ignatieff, 2004, p. 58) contends that '[o]ne reason why we balance threat and response poorly is that the political costs of underreaction are always going to be higher than the cost of overreaction' and therefore 'the political leader who hits hard—with security roundups and preventive detentions—is making a safer bet, in relation to his own political future, than one who adopts the precautionary strategy of "first do no harm." ' Cronin (2009, p. 117), too, notes: 'In the wake of major attacks, officials tend to respond (very humanly) to popular passions and anxiety, resulting in policy made primarily on tactical grounds and undermining their long-term interests.'

This literature indicates that electoral pressures are an important determinant of counterterrorism policies in democratic societies. And it seems intuitive that governmental officials who must think about re-election are likely to have a short-term horizon that can distort the optimality of counterterrorism policy. However, I show that shortsighted electoral motivations are not a sufficient explanation for why democratic governments engage in counterproductive repression when the electorate wants more security. I develop a game-theoretic model to show that limitations on observability of counterterrorism activities are an important factor for understanding the puzzle of counterproductive repression.

The analysis also relates to a political economy literature that investigates how governments set counterterrorism policies that might have various adverse effects (Bueno de Mesquita and Dickson, 2007; Dragu and Polborn, 2014; Rosendorff and Sandler, 2004; Siqueira and Sandler, 2006). For example, Siqueira and Sandler (2006) develop a model in which the government faces a trade-off between counterterrorism spending and provision of public goods, and this policy trade-off can induce a counterproductive response. Bueno de Mesquita and Dickson (2007) develop a model in which an extremist faction considers attacking a government to provoke a counterterrorism response that will radicalize the population. The population is uncertain about the government's type; this can lead to situations in which the government engages in counterproductive action.[2] Undoubtedly, policy trade-offs and uncertainty about the government's motivations are important factors for understanding the puzzle of counterproductive repression. This article is complementary to such existing works in that it focuses on another determinant of counterterrorism policy in democratic societies: how electoral pressures to do more on security affect the government's choice of counterterrorism policy.

Understanding how electoral pressures affect counterterrorism policy is particularly important since the literature suggests that citizens want the government to focus more on delivering security in the aftermath of terrorist attacks (Berrebi and Klor, 2008; Davis and Silver, 2004; Gassebner et al., 2008; Merolla and Zechmeister, 2009) and that the public supports aggressive counterterrorism policies when the salience of terrorism increases (Gadarian, 2010; Hetherington and Suhay, 2011; Merolla and Zechmeister, 2009). While

existing research has documented that there are strong public demands to forcefully tackle the terrorist threat, especially after a terrorist attack, scholars have not systematically investigate the mechanism and the conditions under which electoral pressures can induce the government to engage in counterproductive repression.[3]

3. The model

There are three players: a representative citizen, a government (elected), and a community whose actions can affect terrorism prevention. The government chooses a level of repressive counterterrorism activities $r \in [0, \bar{r}]$. The community chooses a level of activities to support terrorism prevention $a \in [0, \bar{a}]$.

Terrorism occurrence is captured by a binary variable, T, where $T = 1$ denotes a successful terrorist attack and $T = 0$ its absence or failure. The actions of the government and the community translate into a probability of a successful terrorist attack, given by the function $P(r, a) = \alpha e^{-r} + (1 - \alpha)e^{-a}$.[4] This probability decreases if the government chooses a higher r and also if the community chooses a higher a, and it is convex in both r and a (i.e., there are decreasing marginal returns to terrorism prevention in both r and a: $\partial^2 P/\partial r^2 > 0$ and $\partial^2 P/\partial a^2 > 0$). The parameter $\alpha \in [0, 1]$ measures the importance of the government's action (relative to the community's action) for reducing terrorism: a higher α means that the government's action is relatively more consequential for terrorism prevention.

Let $u_{\mathrm{g}}(T)$ be the government's payoff if the outcome is $T \in \{0, 1\}$, and $u_{\mathrm{g}}(1) < u_{\mathrm{g}}(0)$. Also, $\Delta_{\mathrm{g}} \equiv u_{\mathrm{g}}(0) - u_{\mathrm{g}}(1)$ denotes the difference between the government's payoff if the outcome is $T = 0$ rather than $T = 1$. The parameter Δ_{g} can be thought of as the government's stake in preventing a terrorist attack. The government also cares about re-election and receives an additional payoff B_o if and only if re-elected; thus one can think of B_o as a measure of the government's electoral benefits when choosing the counterterrorism policy. Finally, a function $C_{\mathrm{g}}(r) = k_{\mathrm{g}}r$ captures the government's cost for repressive activities, where the parameter k_{g} can be thought as the government's marginal cost for counterterrorism activities. Thus, the government's expected utility is

$$U_{\mathrm{g}}(r, a) = (1 - P(r, a)) \cdot \left[u_{\mathrm{g}}(0) + B_o \cdot \pi(0) \right] + P(r, a) \left[u_{\mathrm{g}}(1) + B_o \cdot \pi(1) \right] - C_{\mathrm{g}}(r)$$
$$= u_{\mathrm{g}}(0) + B_o \cdot \pi(0) - [\alpha e^{-r} + (1 - \alpha)e^{-a}](\Delta_{\mathrm{g}} + \delta B_o) - k_{\mathrm{g}}r \qquad (1)$$

where $\pi(T = j)$ is the government's re-election probability given the realization of $T = j$ for $j \in \{0, 1\}$, and $\delta \equiv \pi(0) - \pi(1)$ is the difference between the re-election probability if $T = 0$ and the re-election probability if $T = 1$. The parameter δ, which will be specified later, can be thought of as the government's electoral incentives to prevent a terrorist attack.

Let $u_{\mathrm{c}}(T)$ be the community's payoff if the outcome is $T \in \{0, 1\}$, and $u_{\mathrm{c}}(1) < u_{\mathrm{c}}(0)$. Also, let $\Delta_{\mathrm{c}} \equiv u_{\mathrm{c}}(0) - u_{\mathrm{c}}(1)$ denote the payoff difference if the outcome is $T = 0$ rather than $T = 1$; the parameter Δ_{c} can be thought of as the community's stake in preventing a terrorist attack. Notice that the relevant community could be domestic or international (or both), depending on the nature of the threat. For example, in the context of fighting an ethnonationalist terrorist group, such as Euskadi Ta Askatasuna (ETA) or the Irish Republican Army (IRA), the relevant community is domestic. In the context of fighting

a transnational terrorist threat such as Al Qaeda and its affiliates, the relevant community can be both domestic (i.e., the Muslim communities in various Western countries) and international (i.e., the Muslim communities in Pakistan, Yemen, Afghanistan, Egypt, and elsewhere). That repression can affect the legitimacy of counterterrorism efforts in the eyes of the broader communities that terrorists claim to represent is a general observation in studies of terrorism (Cronin, 2009).

To formalize the notion that indiscriminate repression negatively affects the community's incentives to help the efforts of terrorism prevention, let the community's marginal cost for terror prevention activities be increasing in the level of repression, r. That is, the community's cost of a is given by the function $C_c(a, r) = k_c(1 + r)a$, where the parameter k_c measures the community's marginal cost and where the marginal cost increases in r (i.e., $\partial^2 C_c / \partial a \partial r > 0$), as mentioned. The notion that repressive counterterrorism can have negative effects and alienate the community from supporting terrorism prevention could also be formalized by assuming that a higher level of r induces the community to care relatively less about terrorism reduction. Both formulations are substantively plausible; in this analysis, I use the first formulation but the results are identical if we use the latter.

In summary, the community's expected utility is

$$U_c(r, a) = P(r, a) \cdot u_c(1) + (1 - P(r, a)) \cdot u_c(0) - C_c(a, r)$$
$$= u_c(0) - [\alpha e^{-r} + (1 - \alpha)e^{-a}]\Delta_c - k_c(1 + r)a \qquad (2)$$

The representative citizen observes whether a terrorist attack occurs or not, which happens with probability $P(r, a)$, and makes a binary decision $v \in \{0, 1\}$, where 1 is interpreted as re-electing the government and 0 as electing the opposition instead.[5] The representative citizen receives utility $U_v^1(T, W)$ from re-electing the incumbent government, and utility U_v^o from electing the opposition. Here, $T \in \{0, 1\}$ denotes the outcome of an attack, as specified before, and W denotes the performance of the government in areas other than terrorism prevention (such as the economic performance of the government), which is a random variable when the government chooses r. The representative citizen's utility is decreasing in T (i.e., the representative citizen dislikes terrorist attacks), and increases in W (i.e., the representative citizen gets a higher payoff when the government's performance in areas other than terrorism is higher).

The re-election decision of the representative citizen is simple. For each $T = j, j \in \{0, 1\}$, there exists a critical level ω_j, such that the government is re-elected if and only if $W \geq \omega_j$. Because U_v^1 is decreasing in T and increasing in W, this implies that $\omega_0 < \omega_1$, i.e., all else equal, if there was a terrorist attack, then the representative citizen requires a stronger economic performance to re-elect the government than if there was no terrorist attack. Let $\pi(T = j) = \text{Prob}(W \geq \omega_j)$ for $j \in \{0, 1\}$ denote the probability that the voter re-elects the government when $T = j$. Note that $\omega_0 < \omega_1$ implies $\pi(0) \geq \pi(1)$, i.e., the re-election probability is higher if the government is more successful in preventing a terror attack, where $\delta \equiv \pi(0) - \pi(1)$, as previously mentioned, can be thought of as the government's electoral incentives to stop a terrorist attack.

I use a simple probabilistic voting rule for the representative citizens because the primary focus of the model is to investigate why and under which conditions a democratic

government undertakes counterproductive repression when responding to increased electoral incentives to provide security. This re-election rule can be micro-founded in a standard adverse-selection model of electoral accountability, in which the policy outcome provides information about an unknown level of government's competence to prevent terrorist attacks and in which the representative citizen is prospectively rational (Dragu and Polborn, 2014).

To show that shortsighted electoral motivations are not a sufficient explanation for why the governments might engage in counterproductive repression, I proceed as follows. First, I analyze the game in which the community does not observe the level of counterterrorism activities before choosing its action (i.e., the players choose their actions simultaneously). In this context, I show that electoral pressures to reduce terrorism (i.e., an increase in δ) can induce the government to choose an inefficient level of repressive activities in equilibrium. Second, I analyze the game in which the community observes the level of counterterrorism activities before choosing its action to show that, in equilibrium, the government would not respond to electoral pressures to provide more security with counterproductive repression, even if the government has shortsighted electoral motivations when setting its counterterrorism policy. Hence, limitations on observability of counterterrorism activities are necessary for understanding why public pressures might induce democratic governments to choose ineffective security policies.

4. Repressive counterterrorism and its effectiveness

In this section, I solve for the Nash equilibrium of the game in which the community doesn't observe the level of counterterrorism activities before choosing its action (i.e., the players choose their actions simultaneously). For simplicity of exposition, I relegate the technical derivations to the appendix and only state the main results.

The unique equilibrium of the game is the solution to the system of equations given by the first-order conditions of the government's objective function (equation (1)) and the community's objective function (equation (2)), respectively. The government's equilibrium action is

$$r^*(\delta) = \ln\left(\frac{\alpha(\Delta_g + \delta B_o)}{k_g}\right)$$

provided that this is positive (otherwise $r^* = 0$). The community's equilibrium action is

$$a^*(\delta) = \ln\left(\frac{(1-\alpha)\Delta_c}{k_c}\right) - \ln\left(\ln\left(\frac{e\alpha(\Delta_g + \delta B_o)}{k_g}\right)\right)$$

provided that this is positive (otherwise $a^* = 0$).[6]

Next we can do comparative statics on how the government's electoral incentives to stop a terrorist attack (i.e., δ) affect the government's and the community's equilibrium actions. We have the following result.

Proposition 1. *The government's equilibrium action increases in δ and the community's equilibrium action decreases in δ.*

Proposition 1 indicates that the government's equilibrium action increases in government's electoral incentives to stop a terrorist attack. The result is intuitive: if there are increased electoral incentives to provide security, the government does more of what is under its control and therefore increases its level of counterterrorism activities. Conversely, Proposition 1 indicates that the community's equilibrium action decreases in δ. This result is intuitive as well: an increase in government's electoral incentives to stop a terrorist attack increases the level of repressive counterterrorism activities and, because of this, a higher level of counterterrorism activities reduces the community's incentives to help the effort of terrorism prevention; then augmented electoral incentives to provide security decrease the community's equilibrium action.

The probability of a terrorist attack is a function of the government's and the community's actions; since the government's electoral incentives to stop a terrorist attack affect both the government's and the community's equilibrium actions, we can analyze how changes in δ affect the equilibrium probability of a terrorist attack. The equilibrium probability of a terrorist attack is given by

$$P^*(\delta) = \frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}\left(1 + \ln\left(\frac{\alpha}{k_g}\right) + \ln\left(\Delta_g + \delta B_o\right)\right)$$

The next proposition shows how the equilibrium probability of a terrorist attack changes when δ increases.[7]

Proposition 2. *When the government faces increased electoral incentives to prevent terrorist attacks (i.e., δ increases), the equilibrium probability of a terrorist attack increases if*

$$\frac{k_c}{\Delta_c} - \frac{k_g}{\Delta_g + \delta B_o} > 0 \tag{3}$$

and decreases otherwise.

The intuition for Proposition 2 is the following. There are two competing effects on the equilibrium probability of a terrorist attack when δ increases. Proposition 1 indicates that an increase in the government's electoral incentives to stop a terrorist attack increases the equilibrium level of counterterrorism activities, which, all else equal, reduces the equilibrium probability of a terrorist attack. Conversely, Proposition 1 shows that an increase in the government's electoral incentives to stop a terrorist attack decreases the community's equilibrium level of a, which, all else equal, increases the equilibrium probability of a terrorist attack. Proposition 2 shows that which of these two effects dominates depends on the sign of expression (3). Specifically, Proposition 2 indicates that the government may choose an equilibrium level of repressive activities that is too excessive from a security standpoint and therefore counterproductive: an increase in δ translates into an increased equilibrium probability of a terrorist attack when condition (3) holds.

The rationale for Proposition 2 is as follows: in equilibrium, the government knows that a higher level of repressive activities has a negative effect on the community's incentives to support terrorism prevention; however, the government cannot credibly restrain its choice of repressive activity when facing increased electoral pressures to prevent a terrorist attack. In other words, the government cannot fully internalize the negative

effect of repressive counterterrorism on the community's incentives in such a way that the equilibrium probability of a terrorist attack is reduced when the government responds to electoral pressures to deliver security.

The fact that the government cannot credibly restrain its choice of repressive activities to a level that is security-optimal implies, more generally, that the government might engage in counterproductive repression whenever it has augmented incentives to safeguard security. For instance, an increase in the government's stake in preventing a terrorist attack (i..e, an increase in Δ_g) or a decrease in the government's marginal cost for repressive action (i.e., a decrease in k_g) can have such an effect. The next proposition states how changes in exogenous parameters (other than δ) affect the equilibrium probability of a terrorist attack.

Proposition 3. *An increase in Δ_g or a decrease in k_g increases the equilibrium probability of a terrorist attack if condition* (3) *holds and decreases it otherwise. An increase in Δ_c or a decrease in k_c decreases the equilibrium probability of a terrorist attack.*

Proposition 3 shows that an increase in Δ_g or a decrease in k_g can increase the equilibrium probability of a terrorist attack. The logic is similar to how changes in δ affect the equilibrium level of security. Proposition 3 also shows that the equilibrium probability of a terrorist attack decreases if Δ_c increases or if k_c decreases. The rationale is that an increase in the community's stake in preventing a terrorist attack, Δ_c, or a decrease in the community's marginal cost for terror prevention activities, k_c, increases the community's equilibrium action. Because the probability of a terrorist attack decreases in a, this implies that an increase in Δ_c or a decrease in k_c reduces the equilibrium probability of a terrorist attack.[8]

5. Observability of counterterrorism action

Proposition 2 shows that the equilibrium probability of a terrorist attack can increase when the government responds to electoral pressures to provide security. In this section, I explore why the government chooses an equilibrium level of repressive activities that can increase the probability of a terrorist attack when δ increases. Specifically, I show that the fact that the government has shortsighted electoral motivations (i.e., the government has a payoff B_o for being re-elected in office) when setting counterterrorism policy is not a sufficient explanation for why the government chooses an inefficient equilibrium level of counterterrorism activities. If the community observes the level of r before choosing its action, then the government won't choose an inefficient action when facing increased electoral incentives to deliver security. In other words, limitations on observability of counterterrorism activities are an important factor for understanding why electoral pressures to safeguard security induce government overreaction.

To show this, let us analyze the effect of an increase in δ on the equilibrium probability of a terrorist attack in a game in which the community perfectly observes the level of counterterrorism activities before choosing its action. As with the previous analysis, the community's objective function (2) is concave in a; thus, the unique optimal a is the solution of the first-order condition

$$(1 - \alpha)e^{-a}\Delta_c - k_c(1 + r) = 0$$

which implies that the community's optimal action is

$$a(r) = \ln\left(\frac{(1-\alpha)\Delta_c}{k_c(1+r)}\right)$$

Using backward induction, the government's optimization is

$$\max_r \left\{ U_g(0) - \left[\alpha e^{-r} + (1-\alpha)e^{-a(r)}\right](\Delta_g + \delta B_o) - k_g r \right\}$$

Solving the first-order condition of the government's maximization problem yields

$$\left[\alpha e^{-r} + (1-\alpha)e^{-a(r)}a'(r)\right](\Delta_g + \delta B_o) - k_g = 0$$

Substituting the value of $a(r)$ and $a'(r)$ in this expression, the equilibrium level of r in this game is

$$\tilde{r}(\delta) = \ln\left(\frac{\alpha}{\frac{k_c}{\Delta_c} + \frac{k_g}{\Delta_g + \delta B_o}}\right)$$

provided that this is positive (otherwise $\tilde{r} = 0$). Furthermore, substituting the government's equilibrium action into the community's best response function, the community's equilibrium action in this game is

$$\tilde{a}(\delta) = \ln\left(\frac{(1-\alpha)\Delta_c}{k_c}\right) - \ln\left(\ln\left(\frac{\alpha e}{\frac{k_c}{\Delta_c} + \frac{k_g}{\Delta_g + \delta B_o}}\right)\right)$$

provided that this is positive (otherwise $\tilde{a} = 0$).[9]

A simple inspection of the government's and the community's equilibrium actions shows that both equilibrium actions increase in δ, which is similar to Proposition 1. Given the values of $\tilde{r}(\delta)$ and $\tilde{a}(\delta)$, the equilibrium probability of a terrorist attack is

$$\tilde{P}(\delta) = \frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c} \ln\left(\frac{\alpha e^2}{\frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}}\right)$$

The next proposition states how the equilibrium probability of a terrorist attack changes when δ increases, if the community observes r before choosing its action, while keeping all other parameters exactly the same as in the previous game.[10]

Proposition 4. *An increase in the government's electoral incentives to prevent terrorist attacks (i.e., an increase in δ) reduces the equilibrium probability of a terrorist attack if the community observes the level of counterterrorism activities before choosing its action.*

As for the previous analysis, there are two competing effects on the equilibrium probability of a terrorist attack when δ increases. Proposition 4 shows that, if the community observes the level of counterterrorism activities before choosing a, the direct effect of

reducing the equilibrium probability of a terrorist attack (because of a higher equilibrium level of r) dominates the indirect (strategic) effect of increasing the equilibrium probability of a terrorist attack (because of a lower equilibrium level of a), and therefore the net effect of a higher equilibrium level of repressive activities (due to an increase in δ) is to decrease the equilibrium probability of a terrorist attack.

Recall that the government gets a payoff B_o for being re-elected in office, and these office concerns create a situation in which the government has shortsighted electoral motivations to choose security policies to prevent a terrorist attack before the next election. Proposition 4 shows that the government will choose an effective level of counterterrorism activities when responding to electoral demands for more security if the community observes the level of counterterrorism activities, *even if the government has shortsighted electoral motivations (i.e., the B_o payoff) when formulating security policies*. Hence shortsighted electoral motivations are not a sufficient explanation for why the government engages in counterproductive repression when responding to electoral pressures to safeguard security.

Taken together, Propositions 2 and 4 help us understand the mechanism by which democratic governments engage in counterproductive repression when the electorate demands more security. The key difference between the games associated with Propositions 2 and 4 is whether or not the community observes the level of counterterrorism activities before choosing its action. Proposition 4 shows that the equilibrium probability of a terrorist attack always decreases in δ if the community observes r before choosing its action. This implies that limitations on observability of counterterrorism activities are an important factor for understanding why democratic governments resort to counterproductive repression in response to electoral demands for more security.[11]

Limitations on observability of counterterrorism actions affect the mutual knowledge between the government and the community since it is important for the government to know that the community knows its level counterterrorism activities in order for the government to be able to credibly restrain to a level of r that decreases the probability of a terrorist attack when δ increases. To further underscore the importance of observability for credible commitments, notice that the community's equilibrium action is higher in the game in which the community observes r than in the game in which it does not, $a^* < \tilde{a}$. From the government's perspective, a higher action by the community is always preferable since it reduces the probability of a terrorist attack, all else being equal. However, the government's preferred action if the community chooses $\tilde{a}$ is not $\tilde{r}$ but rather some level of r that is higher than $\tilde{r}$, in which case the community would not want to choose $\tilde{a}$. In other words, a government's promise that the level of counterterrorism activities is going to be $\tilde{r}$ lacks credibility, as the government has a profitable deviation if the community plays $\tilde{a}$. For the commitment to be credible, the community needs to observe the government's level of counterterrorism activities; otherwise, the community knows that the government has incentives to choose a more repressive action.

As Schelling (2007) has argued in his classic essay on commitment, visibility of one's action is a necessary stepping stone to establish and maintain credible commitments. In other words, transparency of counterterrorism activities is perhaps a minimum condition for the government to credibly restrain its counterterrorism efforts when responding to public pressures to do more on terrorism. Notwithstanding its importance, scholars have noted that there are inherent constraints on the transparency of counterterrorism

activities, which perhaps makes credible commitments a difficult endeavor in this area. For one, counterterrorism activities require some secrecy for practical reasons, ranging from protecting the identity of counterterrorism agents to not revealing existing tactics to terrorists. In other words, counterterrorism operations need to be veiled in secrecy to be effective; otherwise, terrorists can adjust their strategy to render those tactics largely ineffective.[12] Over and above such efficiency justifications, there are strong bureaucratic interests, ranging from dogging accountability to limiting public oversight of security operations, interests that put a strong cap on the transparency of counterterrorism activities. That security agencies have bureaucratic incentives in maintaining secrecy is, of course, not surprising, as scholars have extensively discussed how difficult it is to make security agencies accountable to elected politicians and citizens (Dragu, 2011, 2017; Glennon, 2015). Indeed, consistent with such bureaucratic incentives for secrecy, governmental officials have exerted substantial effort to defend and protect the secrecy of counterterrorism operations after 9/11 (Colaresi, 2014). From surveillance to drone strikes, almost every facet of counterterrorism operations has been shrouded in secrecy as security agencies have classified information, minimized leaks, and made it difficult for whistleblowers to reveal information.

The US drone policy illustrates these inherent constraints on the transparency of counterterrorism operations. During the Obama presidency, the US drone program has been a topic of significant debate, with critics pointing out that its secrecy can undermine both the international rule of law and long-term US security interests. For instance, in a 2013 global survey, *Pew Research* reported considerable opposition, especially in predominantly Muslim countries, to drone strikes (Drake, 2013) and a Gallup poll in February 2013 found that 92% of the people in Pakistan disapprove of the American leadership, negative opinions largely attributable to public perceptions regarding the unfairness of targeted killings (Dugan and Younis, 2012). Since research on the root causes of radicalization points to moral outrage at perceived injustice against one's group as a key determinant of radicalization (Atran, 2010), shaping public perceptions that the drone program is legitimate and fair is indeed important for the long-term effectiveness of such counterterrorism policies.

In an attempt to improve its perceived fairness and to make drone policy more transparent, in May 2013, President Obama announced a major overhaul of the culture of secrecy surrounding targeted killings by promising that 'clear guidelines' would regulate how security agencies carry drone strikes (Baker, 2013). However, according to news reports, more than 3 years after President Obama's pledge on transparency, his administration's policy on drone strikes has remained largely secret (Gibbons-Neff, 2016). The main reasons for this are bureaucratic hurdles and resistance to lifting the veil of secrecy. For one, the drone program is, in essence, a covert operation, which implies that security agencies need to comply with rules of classified information and covert action. Because of this, public information about targeted killings can only be conveyed in limited and vague terms, which ultimately make any public disclosure about drone operations incomplete and non-credible. Second, transparency would invariably impose operational and accountability costs on the counterterrorism agencies in charge of such operations, and these costs give them strong incentives to maintain secrecy over crucial aspects of drone policy. Indeed, security officials have routinely failed to be transparent even when it comes to some of the most basic information about the drone program:

what is the internal process by which 'suspected' terrorists are placed on the kill list, how legally critical terms for undertaking drone strikes, such as 'combatant' and terrorist 'leader' are operationalized, or how many innocent people have been killed in drone operations (Ackerman, 2015).

Overall, this analysis shows that limitations on the observability of counterterrorism activities are an important factor for understanding why democratic governments might overreact with ineffective counterterrorism policies when facing public pressures for security.[13] This provides a corrective to the theoretical claim that democratic governments engage in counterproductive repression because they have shortsighted electoral incentives to respond to electoral demands for more security, incentives which preclude governments from properly weighing the consequences of repressive actions (Crenshaw, 2010; Cronin, 2009; Donohue, 2008; Heymann, 2003; Ignatieff, 2004).

6. Empirical and policy implications

As mentioned, the empirical literature suggests that the citizens want increased focus on security, especially in the aftermath of terrorist attacks (Berrebi and Klor, 2008; Davis and Silver, 2004; Hetherington and Suhay, 2011; Merolla and Zechmeister, 2009). As such, in this section, I further investigate the conditions under which the government is more likely to engage in counterproductive repression in response to electoral pressures to tackle the terrorist threat. Proposition 2 indicates that augmented electoral pressures to do more on security increase the equilibrium probability of a terrorist attack if condition (3) holds. A simple inspection of expression (3) shows that the inequality is more likely to be satisfied if, all else equal, Δ_g and k_c are higher and if Δ_c and k_g are lower. As a result, we can state under which conditions repressive counterterrorism is more likely to be ineffective when δ increases. We have the following result.

Proposition 5. *When the government faces increased electoral incentives to deliver security (i.e., δ increases), the equilibrium level of r is more likely to be counterproductive if Δ_g is higher, if k_c is higher, if Δ_c is lower, and if k_g is lower.*

Proposition 5 shows that the government is more likely to engage in counterproductive repression in response to electoral pressures for more security when the government's stake in preventing a terrorist attack is higher, when the government's marginal cost for counterterrorism activities is lower, when the community's marginal cost for terrorism prevention activities is higher, and when the community's stake in preventing a terrorist attack is lower, all else being equal. These parameters can have various substantive interpretations and, as a result, Proposition 5 has policy and empirical implications for understanding the conditions under which repression is more likely to be counterproductive. Next, I discuss some possible implications of Proposition 5.

First, Proposition 5 shows that, all else being equal, in response to increased electoral incentives to deliver security, the government is more likely to engage in counterproductive repression when the stake for terrorism prevention, Δ_g, is higher. The importance of counterterrorism has increased considerably in the aftermath of 9/11, both in terms of how the citizens view the salience of terrorism prevention and also in terms of how democratic governments rank this issue on their governing agenda (Davis and Silver, 2004; Merolla and Zechmeister, 2009). In this context, the stake of preventing a terrorist

attack, Δ_g, is likely to depend on the salience of terrorism prevention: Δ_g is higher when terrorism prevention is a more salient policy issue. Given this interpretation of Δ_g, an implication of Proposition 5 is that, all else being equal, in response to increased electoral pressures to provide security, democratic governments are more likely to resort to counterproductive repression when terrorism prevention is a more salient issue.

Second, Proposition 5 indicates that, all else being equal, in response to electoral pressures for more security, the government is more likely to adopt counterproductive policies when k_g is lower. Recall that k_g measures the government's marginal cost for counterterrorism activities. Legal restrictions on the government's coercive powers are one important factor that can affect the cost of repressive action; therefore, k_g is likely to be a function of existing legal restrictions on coercive powers. All liberal societies, by their very nature, impose substantive limits on the coercive powers of their governments; however, there are variations across liberal democracies as well as temporal variations within the same country in terms of restrictions on the exercise of coercive powers. For example, recent research shows that there is considerable variation across liberal democracies regarding legal limits on surveillance powers in the context of terrorism prevention (Epifanio, 2011). Given this discussion, Proposition 5 suggests that, in response to increased electoral pressures to provide security, democratic governments are more likely to resort to counterproductive repression when there are fewer legal restrictions on their coercive powers.

Finally, Proposition 5 indicates that, all else equal, when the electorate wants increased security, the government is more likely to undertake counterproductive repressive actions if the community's stake in preventing a terrorist attack, Δ_c, is lower. If the community is an ethnic or religious minority population in a liberal democratic society, then it is plausible to consider that Δ_c is likely to be a function of the degree of integration or assimilation of the community in the social and cultural fabric of the respective liberal society: more integrated communities are also more likely to have a higher stake in terrorism prevention. Given this interpretation of Δ_c, Proposition 5 then suggests that, in response to electoral pressures to tackle the terrorist threat, a democratic government is more likely to engage in counterproductive repression when the communities that terrorists claim to represent are less integrated in the respective liberal society.

The previous discussion points out some implications of Proposition 5. Undoubtedly, there could be other substantive interpretations of the parameters of the model. Proposition 5 presents a general statement of the conditions under which an increase in δ can increase the equilibrium probability of a terrorist attack. As such, scholars could derive additional policy and empirical implications regarding the conditions under which repressive counterterrorism is more likely to be counterproductive.

7. Robustness and extensions

In the online appendix, I provide several extensions of the basic model. First, I show that all the previous results can be obtained in a framework in which the negative effect of repressive activity can be formalized by assuming that a higher r negatively affects the benefits part of the community's payoff rather than the marginal cost. Second, I also show that the model can be applied to analyze the effect of indiscriminate repression on the incentives of those individuals who might get a higher utility if a terrorist attack

occurs rather than if it is prevented. Finally, I show that Proposition 2 is robust to a setting in which the government chooses an action first and then the community imperfectly observes the government's action before choosing a.

8. Conclusions

This article provides a model that links electoral pressures to deliver security with the incentives of elected officials in formulating counterterrorism policies. It analyzes why and under which conditions democratic governments engage in counterproductive repression when responding to electoral demands for more security. First, the article unpacks the mechanism by which a democratic government engages in counterproductive repression in response to electoral pressures to safeguard security. The model shows that limitations on observability of counterterrorism activities are an important factor in understanding why democratic governments might overreact when facing electoral pressures to do more on security. Second, the model also shows that repressive counterterrorism is more likely to be counterproductive when the government's stake in preventing a terrorist attack is higher, when the government's marginal cost for repressive activity is lower, and when the community's stake in preventing a terrorist attack is lower. This analysis allows us to systematically investigate the conditions under which electoral pressures to do more on terrorism are more likely to aggravate the terrorist threat, and has empirical and policy implications regarding the relationship between repression and its (in)effectiveness when democratic polities strive to counter the threat of terrorism.

This article addresses the puzzle of counterproductive repression in the context of fighting terrorism. The existing literature documents a similar paradox in the context of other forms of contentious politics (Gibilisco, 2017; Hollyer et al., 2015; Lichbach, 1987; Little, 2012; Moore, 1998; Pierskalla, 2010; Svolik, 2012; Tyson, 2016). For example, scholars have shown that state coercion can foment public dissent (Lichbach, 1987) and that indiscriminate violence can be counterproductive in the context of civil wars (Kalyvas, 2006). Indiscriminate repression to stave off dissent or to reduce insurgency can perhaps present trade-offs similar to repressive counterterrorism: it can directly decrease the operational capabilities of the dissident or insurgent group but it can also undermine the government's legitimacy and consequently breed both antipathy toward the government and sympathy for the opponent in the relevant population. With appropriate modifications to take into account the specific context of analysis, the framework developed here could be useful to analyze the relationship between repression and its effectiveness in the context of other forms of contentious politics.

Appendix

Proof of Proposition 1. The government's objective function (1) is concave in r, and thus the unique optimal r is the solution of the first-order condition

$$\alpha e^{-r}(\Delta_g + \delta B_o) - k_g = 0 \tag{4}$$

The community's objective function (2) is concave in a, and thus the unique optimal a is the solution of the first-order condition

$$(1 - \alpha)e^{-a}\Delta_c - k_c(1 + r) = 0 \tag{5}$$

The unique equilibrium of the game is the solution to the system of equations given by equations (4) and (5).[14] Solving this system of equations, the government's equilibrium action is

$$r^*(\delta) = \ln\left(\frac{\alpha(\Delta_g + \delta B_o)}{k_g}\right) \tag{6}$$

provided that this is positive (otherwise $r^* = 0$). The community's equilibrium action is

$$a^*(\delta) = \ln\left(\frac{(1 - \alpha)\Delta_c}{k_c}\right) - \ln\left(\ln\left(\frac{e\alpha(\Delta_g + \delta B_o)}{k_g}\right)\right) \tag{7}$$

provided that this is positive (otherwise $a^* = 0$).[15]

A simple inspection of equations (6) and (7) indicates that the government's equilibrium action increases in δ and that the community's equilibrium action decreases in δ, as claimed.[16] □

Proof of Proposition 2. The equilibrium probability of a successful terrorist attack is

$$P^*(\delta) = \frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}\left(1 + \ln\left(\frac{\alpha}{k_g}\right) + \ln\left(\Delta_g + \delta B_o\right)\right)$$

Differentiating P^* with respect to δ yields

$$\frac{dP^*}{d\delta} = -\frac{k_g B_o}{(\Delta_g + \delta B_o)^2} + \frac{k_c}{\Delta_c}\frac{B_o}{(\Delta_g + \delta B_o)}$$

This is positive if and only if

$$\frac{k_c}{\Delta_c} - \frac{k_g}{\Delta_g + \delta B_o} > 0$$

and negative otherwise, as claimed. □

Proof of Proposition 3. The equilibrium probability of a successful terror attack is

$$P^* = \frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}\left(1 + \ln\left(\frac{\alpha}{k_g}\right) + \ln\left(\Delta_g + \delta B_o\right)\right)$$

A simple inspection of P^* shows that it decreases in Δ_c and increases in k_c, as claimed.

Differentiating P^* with respect to Δ_g yields

$$\frac{dP^*}{d\Delta_g} = \frac{-k_g}{(\Delta_g + \delta B_o)^2} + \frac{k_c}{\Delta_c}\frac{1}{\Delta_g + \delta B_o}$$

$$= \frac{1}{\Delta_g + \delta B_o}\left(\frac{k_c}{\Delta_c} - \frac{k_g}{\Delta_g + \delta B_o}\right)$$

The expression is positive if

$$\frac{k_c}{\Delta_c} - \frac{k_g}{\Delta_g + \delta B_o} > 0$$

and negative otherwise, as claimed.

Differentiating P^* with respect to k_g yields

$$\frac{dP^*}{dk_g} = \frac{1}{\Delta_g + \delta B_o} - \frac{k_c}{\Delta_c}\frac{1}{k_g}$$
$$= -\frac{1}{k_g}\left(\frac{k_c}{\Delta_c} - \frac{k_g}{\Delta_g + \delta B_o}\right)$$

The expression is negative if

$$\frac{k_c}{\Delta_c} - \frac{k_g}{\Delta_g + \delta B_o} > 0$$

and positive otherwise, as claimed.   □

Proof of Proposition 4. As mentioned, the equilibrium level of counterterrorism activities in an interior equilibrium is

$$\tilde{r} = \ln\left(\frac{\alpha}{\frac{k_c}{\Delta_c} + \frac{k_g}{\Delta_g + \delta B_o}}\right) \tag{8}$$

and the community's equilibrium action in an interior equilibrium is[17]

$$\tilde{a} = \ln\left(\frac{(1-\alpha)\Delta_c}{k_c}\right) - \ln\left(\ln\left(\frac{\alpha e}{\frac{k_c}{\Delta_c} + \frac{k_g}{\Delta_g + \delta B_o}}\right)\right) \tag{9}$$

Given these equilibrium actions, the equilibrium probability of a successful terror attack is

$$\tilde{P}(\delta) = \frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}\ln\left(\frac{\alpha e^2}{\frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}}\right)$$

Differentiating $\tilde{P}$ with respect to δ gives us

$$
\begin{aligned}
\frac{\mathrm{d}\tilde{P}}{\mathrm{d}\delta} &= -\frac{k_g B_o}{(\Delta_g + \delta B_o)^2} + \frac{k_c}{\Delta_c} \frac{\frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}}{\alpha e^2} \frac{\frac{\alpha e^2 k_g B_o}{(\Delta_g + \delta B_o)^2}}{\left(\frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}\right)^2} \\[2ex]
&= -\frac{k_g B_o}{(\Delta_g + \delta B_o)^2} + \frac{k_g B_o}{[\Delta_g + \delta B_o]^2} \frac{k_c}{\Delta_c} \frac{1}{\frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}} \\[2ex]
&= -\frac{k_g B_o}{(\Delta_g + \delta B_o)^2} \left[1 - \frac{\frac{k_c}{\Delta_c}}{\frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}} \right] \\[2ex]
&= -\frac{k_g B_o}{(\Delta_g + \delta B_o)^2} \frac{\frac{k_g}{\Delta_g + \delta B_o}}{\frac{k_g}{\Delta_g + \delta B_o} + \frac{k_c}{\Delta_c}} \\[2ex]
&< 0
\end{aligned}
$$

Thus $\tilde{P}$ decreases when δ increases, as claimed. $\square$

Notes

1. For excellent historical accounts of how terrorists have thought about and used the strategy of provoking an overreaction, see Fromkin (1975) and Parker (2015).
2. Also, Rosendorff and Sandler (2004) analyze the strategic interaction between a government and terrorists in a model in which the level of proactive activity and the choice of terrorist target are endogenous. Dragu and Polborn (2014) analyze the interaction among a representative voter, an elected executive, and the population that the terrorists claim to represent to show that legal limits on executive power can be security-beneficial relative to a system of executive discretion. The theoretical set-up here is related to the game in Dragu and Polborn (2014); the theoretical analysis in this article is focused on showing that limitations on observability of counterterrorism activities are an important factor for understanding why public pressures might induce government overreaction, which provides a corrective to the prevailing claim

that democratic governments engage in counterproductive repression because of shortsighted electoral motivations.

3. The model also contributes to a literature that investigates the political determinants of counterterrorism response in democratic polities (Bueno de Mesquita, 2007; Indridason, 2008; Fox and Stephenson, 2011; Langlois and Langlois, 2011; Moore, 2010).

4. Note that e in this function is the base of the natural logarithm.

5. The literature also notes that repressive counterterrorism directed at minority communities inside a country (such as minority Muslim communities in the context of fitting the Al Qaeda terrorism) or at communities outside the borders of a country (such as Muslim communities in Pakistan, Yemen, Afghanistan, in the context of terrorism prevention after 9/11) is also politically convenient since citizens do not bear the negative effects of such repressive activities (Cole, 2005).

6. Note that

$$\ln\left(\ln\left(\frac{\alpha e}{\frac{k_c}{\Delta_c} + \frac{k_g}{\Delta_g + \delta B_o}}\right)\right)$$

is well-defined when $r^* > 0$; if $r^* = 0$, then

$$a^* = \ln\left(\frac{(1-\alpha)\Delta_c}{k_c}\right)$$

provided that this is positive (otherwise $a^* = 0$).

7. The substantive focus of this paper is to investigate why and when democratic governments engage in counterproductive repression (in response to an increase in δ) given the (endogenous) benefits and costs of repressive action. Therefore, I focus the comparative statics exercise on an interior equilibrium in which $r^* > 0$ and $a^* > 0$.

8. The results of Proposition 3 could be useful to analyze the relationship between repressive counterterrorism and its effectiveness in non-democratic polities.

9. Note that

$$\ln\left(\ln\left(\frac{\alpha e}{\frac{k_c}{\Delta_c} + \frac{k_g}{\Delta_g + \delta B_o}}\right)\right)$$

is well-defined when $\tilde{r} > 0$; if $\tilde{r} = 0$, then

$$\tilde{a} = \ln\left(\frac{(1-\alpha)\Delta_c}{k_c}\right)$$

provided that this is positive (otherwise $\tilde{a} = 0$).

10. As mentioned, I focus this comparative statics exercise on an interior equilibrium in which $\tilde{r} > 0$ and $\tilde{a} > 0$.

11. This substantive conclusion about the importance of observability of counterterrorism action does not depend on the fact that Proposition 2 is obtained in a set-up in which the players choose their actions simultaneously. In the online appendix, I show that Proposition 2 also obtains in a setting in which the government moves first while the community imperfectly observes the level of r before choosing its action (similar to Bagwell's (1995) classical analysis on commitment and observability).

12. Indeed, governmental officials exert substantial effort to defend and protect the secrecy of counterterrorism operations, on the account that it is necessary for effectiveness (Di Lonardo, 2016; Shapiro and Siegel, 2010).

13. Reputation could also help the government to credibly restrain its action; however, such mechanisms also require transparency of counterterrorism action to be effective. Moreover, such mechanisms might not be feasible since the (current) government might not be re-elected and thus the community might not play the game with the same government in future periods. That is, the (current) government's reputation for a restrained response might be difficult to establish when the interaction is between a sequence of short-term players (the government in office in a certain period) and a long-run player (i.e., the community).

14. Note that the government's optimal action is independent of a since $P(r, a)$ is additively separable in a and r. In the online appendix, I show that this analysis holds in a general set-up in which $P(r, a)$ is not separable in a and r (i.e., a and r can be complements or substitutes).

15. Note that

$$\ln\left(\ln\left(\frac{\alpha e}{\frac{k_c}{\Delta_c} + \frac{k_g}{[\Delta_g + \delta B_o]}}\right)\right)$$

is well-defined when $r^* > 0$; if $r^* = 0$, then

$$a^* = \ln\left(\frac{(1 - \alpha)\Delta_c}{k_c}\right)$$

provided that this is positive (otherwise $a^* = 0$).

16. Also, a simple inspection of equations (6) and (7) indicates that an increase in α increases the government's equilibrium action and decreases the community's equilibrium action.

17. Notice that the community's equilibrium action is higher in the commitment game than in the no commitment game, $a^* < \bar{a}$. This is the case since

$$a^* = \ln\left(\frac{(1 - \alpha)\Delta_c}{k_c}\right) - \ln\left(\ln\left(\frac{e\alpha(\Delta_g + \delta B_o)}{k_g}\right)\right)$$

$$\tilde{a} = \ln\left(\frac{(1 - \alpha)\Delta_c}{k_c}\right) - \ln\left(\ln\left(\frac{\alpha e}{\frac{k_c}{\Delta_c} + \frac{k_g}{\Delta_g + \delta B_o}}\right)\right)$$

and

$$\ln\left(\ln\left(\frac{e\alpha(\Delta_g + \delta B_o)}{k_g}\right)\right) > \ln\left(\ln\left(\frac{\alpha e}{\frac{k_c}{\Delta_c} + \frac{k_g}{\Delta_g + \delta B_o}}\right)\right)$$

References

Ackerman S (2015) Inside Obama's drone panopticon: A secret machine with no accountability. *The Guardian* 25 April 2015. https://www.theguardian.com/us-news/2015/apr/25/us-drone-program-secrecy-scrutiny-signature-strikes (accessed 12 September 2016).

Atran S (2010) *Talking to the Enemy: Faith, Brotherhood, and the (Un)Making of Terrorists.* New York: Harper Collins.

Bagwell K (1995) Commitment and observability in games. *Games and Economic Behavior* 8(2): 271–280.

Baker P (2013) Pivoting from a war footing, Obama acts to curtail drones. *The New York Times* 23 May 2013. http://www.nytimes.com/2013/05/24/us/politics/pivoting-from-a-war-footing-obama-acts-to-curtail-drones.html (accessed 12 September 2016).

Benmelech E, Berrebi C and Klor EF (2015) Counter-suicide-terrorism: Evidence from house demolitions. *Journal of Politics* 77(1): 27–43.

Berrebi C and Klor EF (2008) Are voters sensitive to terrorism? Direct evidence from the Israeli electorate. *American Political Science Review* 102(3): 279–301.

Bueno de Mesquita E (2007) Politics and the suboptimal provision of counterterror. *International Organization* 61(1): 9–36.

Bueno de Mesquita E and Dickson ES (2007) The propaganda of the deed: Terrorism, counterterrorism, and mobilization. *American Journal of Political Science* 51(2): 364–381.

Carter DB (2016) Provocation and the strategy of terrorist and guerrilla attacks. *International Organization* 70(1): 133–173.

Colaresi MP (2014) *Democracy Declassified: The Secrecy Dilemma in National Security*. New York: Oxford University Press.

Cole D (2005) *Enemy Aliens: Double Standards and Constitutional Freedoms in The War on Terrorism*. New York: New Press.

Crenshaw M (2010) Introduction. In: Martha Crenshaw M (ed.) *The Consequences of Counterterrorism*. New York: Russell Sage Foundation, pp. 1–30.

Cronin AK (2009) *How Terrorism Ends: Understanding the Decline and Demise of Terrorist Campaigns*. Princeton, NJ: Princeton University Press.

Davis D and Silver B (2004) Civil liberties vs. security: Public opinion in the context of the terrorist attacks on America. *American Journal of Political Science* 48(1): 28–46.

Daxecker UE (2015) Dirty hands: Government torture and terrorism. *Journal of Conflict Resolution*. Epub ahead of print 18 September 2015. DOI:10.1177/0022002715603766.

Daxecker UE and Hess ML (2013) Repression hurts: Coercive government responses and the demise of terrorist campaigns. *British Journal of Political Science* 43(3): 559–577.

Di Lonardo L (2016) *The partisan politics of counterterrorism: reputations, policy transparency, and electoral outcomes, working paper*, New York University. https://wp.nyu.edu/livio_di_lonardo/wp-content/uploads/sites/2762/2015/09/Partisan-Politics Counterterrorism.pdf (accessed 12 September 2016).

Donohue L (2008) *The Cost of Counterterrorism: Power, Politics, and Liberty*. Cambridge, MA: Cambridge University Press.

Dragu T (2011) Is there a trade-off between security and liberty? Executive bias, privacy protections, and terrorism prevention. *American Political Science Review* 105(1): 64–78.

Dragu T (2017) The moral hazard of terrorism prevention. *Journal of Politics* 79(1): 223–236.

Dragu T and Polborn M (2014) The rule of law in the fight against terrorism. *American Journal of Political Science* 58(2): 511–525.

Drake B (2013) Report questions drone use, widely unpopular globally, but not in the U.S. *Pew Research* 23 October 2013. http://www.pewresearch.org/fact-tank/2013/10/23/report-questions-drone-use-widely-unpopular-globally-but-not-in-the-u-s/ (accessed 12 September 2016).

Dugan A and Younis M (2013) Pakistani Disapproval of U.S. Leadership Soars in 2012. *Gallup* 14 February 2013. http://www.gallup.com/poll/160439/2012-pakistani-disapproval-leadership-soars.aspx (accessed 12 September 2016).

Dugan L and Chenoweth E (2012) Moving beyond deterrence: The effectiveness of raising the expected utility of abstaining from terrorism in Israel. *American Sociological Review* 77(4): 597–624.

Enders W and Sandler T (1993) The effectiveness of antiterrorism policies: A vector-autoregression-intervention analysis. *American Political Science Review* 87(4): 829–844.

Epifanio M (2011) Legislative response to international terrorism. *Journal of Peace Research* 48(3): 399–411.

Fox J and Stephenson MC (2011) Judicial review as a response to political posturing. *American Political Science Review* 105(2): 397–414.

Fromkin D (1975) The strategy of terrorism. *Foreign Affairs* 53(4): 683–698.

Gadarian SK (2010) The politics of threat: How terrorism news shapes foreign policy attitudes. *Journal of Politics* 72(2): 469–483.

Gassebner M, Jong-A-Pin R and Mierau JO (2008) Terrorism and electoral accountability: One strike, you're out! *Economics Letters* 100: 126–129.

Gibbons-Neff T (2016) 'Virtually no progress' on making Obama's lethal drone strike policy more transparent, report says. *The Washington Post* 23 February 2016. https://www.washingtonpost.com/news/checkpoint/wp/ 2016/02/23/virtually-no-progress-on-making-obamas-lethal-drone-strike-policy-more-transparent-report-says/?utm_term=.2f4bcf09aafc (accessed 12 September 2016).

Gibilisco M (2017) *Decentralization and the Gamble for Unity*. Rochester, NY: University of Rochester. Available at: https://www.dropbox.com/s/h7s0shnbmbloy3x/grievance Gibilisco.pdf?dl=0 (accessed 12 March 2017).

Gil-Alana LA and Barros CP (2010) A note on the effectiveness of national anti-terrorist policies: Evidence from ETA. *Conflict Management and Peace Science* 27(1): 28–46.

Glennon MJ (2015) *National Security and Double Government*. New York: Oxford University Press.

Hetherington MJ and Suhay E (2011) Authoritarianism, threat, and Americans' support for the war on terror. *American Journal of Political Science* 55(3): 546–560.

Heymann PB (2003) *Terrorism, Freedom, and Security*. Cambridge, MA: MIT Press.

Hollyer JR, Rosendorff BP and Vreeland JR (2015) Transparency, protest and political (in)stability. *American Political Science Review* 109(4): 764–784.

Huq AZ, Tyler TR and Schulhofer SJ (2011) Mechanisms for eliciting cooperation in counterterrorism policing: Evidence from the United Kingdom. *Journal of Empirical Legal Studies* 8(4): 728–761.

Ignatieff M (2004) *The Lesser Evil: Political Ethics in an Age of Terror*. Princeton, NJ: Princeton University Press.

Indridason IH (2008) Does terrorism influence domestic politics? Coalition formation and terrorist incidents. *Journal of Peace Research* 45(2): 241–259.

Kalyvas S (2006) *The Logic of Violence in Civil War*. New York: Cambridge University Press.

Kydd AH and Walter BF (2006) The strategies of terrorism. *International Security* 31(1): 49–80.

LaFree G, Dugan L and Korte R (2009) The impact of British counterterrorist strategies on political violence in Northern Ireland: Comparing deterrence and backlash models. *Criminology* 47(1): 501–530.

Lake DA (2002) Rational extremism: Understanding terrorism in the twenty-first century. *Dialogue IO* 1(1): 15–29.

Langlois CC and Langlois J-P (2011) The escalation of terror: Hate and the demise of terrorist organizations. *Conflict Management and Peace Science* 28(5): 497–521.

Lichbach MI (1987) Deterrence or escalation? The puzzle of aggregate studies of repression and dissent. *Journal of Conflict Resolution* 31(2): 266–297.

Little A (2012) Elections, fraud, and election monitoring in the shadow of revolution. *Quarterly Journal of Political Science* 7(4): 249–283.

Merolla JL and Zechmeister EJ (2009) *Democracy at Risk: How Terrorist Threats Affect the Public*. Chicago, IL: University of Chicago Press.

Moore WH (1998) Repression and dissent: Substitution, context, and timing. *American Journal of Political Science* 42(3): 851–873.

Moore WH (2010) Incarceration, interrogation and counterterror: Do (liberal) democratic institutions constrain Leviathan? *PS: Political Science and Politics* 43(3): 421–424.

Parker T (2015) It's a trap: Provoking an overreaction is terrorism 101. *RUSI Journal* 160(3): 38–46.

Pierskalla JH (2010) Protest, deterrence, and escalation: The strategic calculus of government repression. *Journal of Conflict Resolution* 54(1): 117–145.

Richardson L (2007) *What Terrorists Want*. New York: Random House Trade.

Rosendorf PB and Sandler T (2004) Too much of a good thing? The proactive response dilemma. *Journal of Conflict Resolution* 48(4): 657–671.

Sanchez-Cuenca I and de la Calle L (2009) Domestic terrorism: The hidden side of political violence. *Annual Review of Political Science* 12: 31–49.

Schelling TC (2007) *Strategies of Commitment and Other Essays*. Cambridge, MA: Harvard University Press.

Shapiro J and Siegel DA (2010) Is this paper dangerous? Balancing secrecy and openness in counterterrorism. *Security Studies* 19(1): 66–98.

Siegel DA (2011a) Non-disruptive tactics of suppression are superior in countering terrorism, insurgency, and financial panics. *PLoS One* 6(4): e18545.

Siegel DA (2011b) When does repression work? Collective action and social networks. *Journal of Politics* 73(4): 993–1010.

Siqueira K and Sandler T (2006) Terrorists versus the government: Strategic interaction, support, and sponsorship. *Journal of Conflict Resolution* 50(6): 878–898.

Svolik M (2012) *The Politics of Authoritarian Rule*. Cambridge MA: Cambridge University Press.

Tyler TR and Huq AZ (2010) Legitimacy and deterrence effects in counterterrorism policing: A study of Muslim Americans. *Law and Society Review* 44: 365–402.

Tyson SA (2016) The agency problem underlying the use of repression. Available at: https://ssrn.com/abstract=2864452 (accessed 12 April 2017).

Walsh JI and Piazza JA (2010) Why respecting physical integrity rights reduces terrorism. *Comparative Political Studies* 43(5): 551–77.

Wilkinson P (2006) *Terrorism Versus Democracy: The Liberal State Response*. 2nd ed. London: Routledge.