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Note on terrorist factions and their interactions with governments

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Abstract

This paper studies interactions between governments and non-state terrorist organizations. A terrorist organization consists of two factions, referred to herein as ``politicians'' and ``militants.'' Politicians negotiate with the government. However, extremist militants reject the negotiation, and attempt attacks on the government. If politicians decide to take action against the militants, it is probable that these attempts can be prevented. At a high cost, the government may also take action against the militants, which also harms the politicians. It may be that politicians are better off where militants are stronger.

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1 Introduction

In August 1998, a bombing occurred in Omagh, Northern Ireland. The attack was perpetrated by the "Real IRA" group, which opposed the Good Friday peace agreement with Britain. What consequences did this tragedy have on the Provisional IRA, an organization that negotiated with the British government? Dingley (2001) states that from the Provisionals' point of view, "the after effects did play neatly into their hands. ... They could even be seen to condemn violence and project a sympathetic image of themselves as the peacemakers. ... The Reals could be publicly disowned while working within a Provisional plan to maintain the violent pressure on government while at the same time negotiating under the guise of a cease-fire." This paper addresses the general question of what would be the strategic behavior of a relatively moderate faction of a military organization, during negotiations with an enemy government, when a more militant faction is present. Another example is the Palestine Liberation Organization, which negotiated with the Israeli government on the establishment of a Palestinian Authority, while another Palestinian terrorist organization, Hamas, rejected these negotiations. The Basque Euskadi Ta Askatasuna and the Sri Lankan Tamil groups were also split into moderate and extremist factions. See Bueno De Mesquita (2008) for a model of the formation of terrorist factions.

I consider a non-government military or terrorist organization that includes two factions. For simplicity, I refer to them as *politicians* and *militants*. Politicians negotiate with the rival government, while militants do not. Militants continuously attempt terrorist attacks against the government. During negotiations, politicians promise to fight the terrorism of the militants, but the government does not know if the politicians will keep their promises.

It is not clear whether politicians are interested in a strong militant faction. On one hand, militants can damage the negotiation process. On the other hand, the presence of a strong militant faction can encourage the government to support the politicians.

I suggest a model of a post-negotiation period. Militants, which oppose negotia-

tions, attempt attacks against the government, with some success. A relatively moderate politician faction has some ability to suppress this attempt. However, an effort against militants is costly for politicians, and they may take only because the government encourages them to do so. Moreover, success of anti-militants effort is not certain. The government does not know with certainty whether the successful attacks are the result of a lack of anti-terrorist efforts on the part of the politicians, or because of the ineffectiveness of such efforts. The government can decide to take anti-terrorist actions of its own. Such actions are effective in the sense that they reduce the probability of future terrorist attacks, but they are costly for the government and harmful for both non-government factions. The cost for the government's action may consist of a direct monetary cost of a military operation and political cost because of possible casualties, as well. Therefore, the politicians may wish to take anti-terrorist efforts against the militants to prevent the government's reaction.

One of the conclusions from this analysis is that it may be the case that politicians are better off where militants are stronger. An intuitive explanation is following. If militants are strong, the anti-militant effort is unsuccessful with higher probability. Therefore, following attack by militants, the government tends more to believe that it was successful because of ineffectiveness of action by politician faction, and not because of lack of such an action. Consequently, the government desires less to punish politicians. A conclusion of this result may be that politicians can benefit from supporting the militants during the pre-negotiation period, for example, by delivering weapons to them.

In Bueno De Mesquita (2008), two terrorist factions competed for the support of the population. In Bueno De Mesquita (2005), the moderate terrorists bargained with the government over concessions. It is commonly known that the politicians provided counter-terror aid against the extremists, but there is uncertainty about the commitment of the government to its promises made during negotiations. However, a possibility of an outcome, where the government "buys" the moderates by making an offer of concessions, accepted by moderates, but rejected by extremists, has been shown.

Kydd and Walter (2002) is also related to this work. They model a post-negotiation

period between a government and a militant opposition, and show the conditions in which a moderate faction of the opposition decides whether to suppress an extremist faction of the opposition. Following a terrorist attack launched by the extremists, the government decides whether to fulfill the deal made with the moderates. There is uncertainty about the moderates' desire not to betray the deal with the government, about the capability of the moderates to suppress the extremists, and about the preferences of the government. Conditions for the government fulfilling the deal are provided. As in the current paper, once the terrorist attack takes place, the government does not know if it occurred because the moderates did not try to suppress the extremists or because they did not succeed in doing so. However, my main focus is on the effect of the initial strength of the militants (i.e., the probability that they will succeed in launching an attack on the government in the absence of any attempt to suppress them). Players' preferences are commonly known in my paper.

According to Sandler and Arce (2003), terrorists may be one of two types: "hardline" or "moderate"; hardline terrorists have greater demands when bargaining with a government. Asymmetric information about the terrorists' type can lead to adverse selection.

Dragu and Polborn (2014) consider two actors that can suppress terrorism: a "community" (an analogy to "politicians" in my paper) and a government "executive". It is shown that legal constraints on the "executive" may improve the chances of preventing terrorism.

In many models of military conflicts, one side threatens to fight another side if attacked (see, for instance, the Threat Game by Brams and Kilgour, 1987 or the bargaining model by Fearon, 1994). In the current study, one side (the politicians) fights another side (the militants) because they are being threatened by a third side (the government).

Sometimes, a government is reluctant to attack terrorists because such an attack may lead to an increase in the terrorists' resources. This phenomenon is sometimes referred to in the literature as the *backlash* (see Arce and Sandler, 2010 and Faria and Arce, 2012). I assume that the backlash, if it exists, is accounted for in the cost of action taken by the government, but does not exceed the effectiveness of such action.

2 Model

The game Γ proceeds as follows, with politicians (a supposed moderate faction of a terrorist organization) denoted by P and the government denoted by G.

Step 1. P chooses one of two actions: e (make efforts to suppress the militants) or ne (make no effort). If P chooses e, it pays a cost of $c_P > 0$. G does not observe which action was taken by P.

Step 2. A terrorist attack against G occurs randomly with probability $Pr_n > 0$ if ne was chosen by P, and with probability Pr_P if e was chosen. Both probabilities are commonly known. I refer to Pr_n as the *strength of the militants* and Pr_P—the probability that the militants will succeed despite the efforts against them—as the *ineffectiveness of the effort*. Assume $Pr_P < Pr_n$. G obtains, at this step, $U_1 = 1$ if no attack occurs, and $U_1 = 0$ if there is a successful terrorist attack.

Step 3. If there was a terrorist attack in the previous step, G chooses action r (reaction) or nr (no reaction) against the militants. If r is chosen, G pays a cost of $c_G > 0$. The reaction r is harmful not only to militants, but also to politicians. If r was chosen, P obtains $V_1 = 0$; otherwise, P obtains $V_1 = 1$. If there was no terrorist attack in the previous step, nr is automatically chosen. I assume that the government cannot harm politicians, whom it negotiated with, if G is not attacked.

Step 4. A terrorist attack against G occurs randomly with the following probabilities. If nr was chosen in step 3, the probability of attack is Pr_n if ne was chosen by P, and $Pr_P < Pr_n$ if e was chosen. If r was chosen, the terrorist attack occurs with probability Pr_G, $Pr_G < Pr_n$. G receives a payoff of $U_2 = 1$ if there was no terrorist attack and $U_2 = 0$ otherwise.

Note that disregarding the outcomes of steps 2–3, P cannot change its decision made in step 1. An assumption is that the decision of P whether to suppress militants is a long-term decision that cannot be reconsidered in a short period.

The total payoff of G is

$$TU_G = U_1 + U_2 - C_G, \tag{1}$$

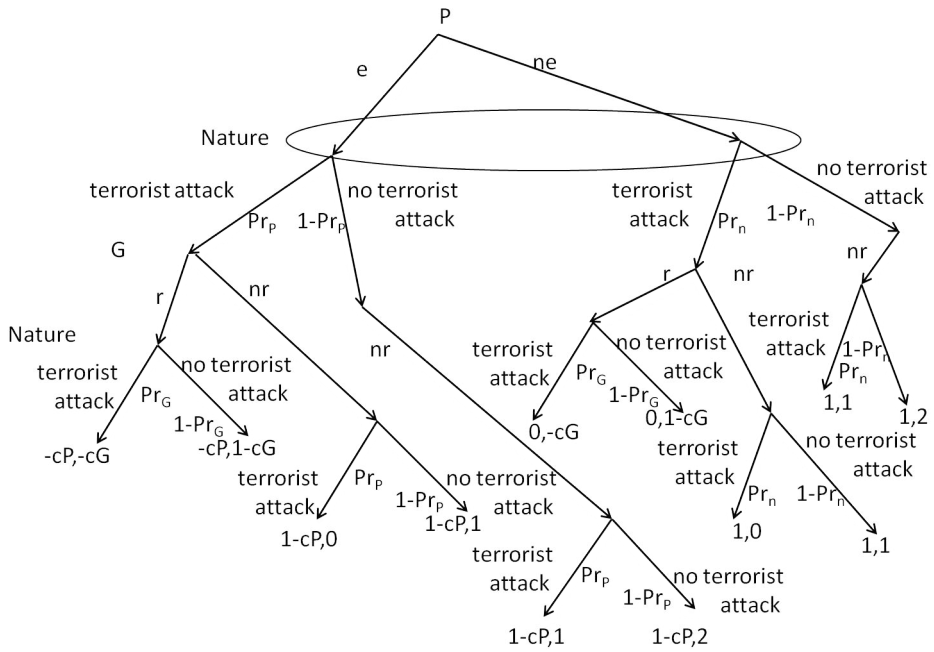

Figure 1: Description of Γ

where $C_G = c_G$ if r was chosen, and $C_G = 0$ otherwise.

The total payoff of P is

$$TU_P = V_1 - C_P, \tag{2}$$

where $C_P = c_P$ if e was chosen, and $C_P = 0$ otherwise.

Proposition 1. The following characterizes the unique equilibrium of Γ.

1. For $Pr_n - Pr_G < c_G$, G, with certainty, chooses nr following a terrorist attack, and P chooses ne.

2. For $c_G < Pr_n - Pr_G$ and $Pr_n - Pr_P < c_P$, P chooses ne, and G, with certainty, chooses r following a terrorist attack.

3. For $c_G < Pr_P - Pr_G$ and $c_P < Pr_n - Pr_P$, P chooses e, and G, with certainty, chooses r following a terrorist attack.

4. For $Pr_P - Pr_G < c_G < Pr_n - Pr_G$ and $c_P \leq Pr_n - Pr_P$, P chooses e with probability $0 < P_e < 1$, and G chooses r following a terrorist attack with probability $0 < Pr_r < 1$.

All proofs appear in the Appendix.

Next, I analyze how the strength of the militants affects the utility of the politicians. The effectiveness of the counter-terror efforts of P depends on the militants' strength, denoted by $Pr_P(Pr_n) \equiv Pr_P$ (the ineffectiveness of the effort for a given strength Pr_n). It is natural to assume that $Pr_P(Pr_n)$ is nondecreasing in Pr_n. Indeed, as the strength of the militants increases, the probability of a successful attack increases even if P makes an effort to suppress them. However, this assumption is not required for the following proposition.

Proposition 2. Let $Pr_P(Pr_n) - Pr_G < c_G < Pr_n - Pr_G$ and $c_P < Pr_n - Pr_P r(Pr_n)$. If the elasticity $\frac{\frac{\partial Pr_P(Pr_n)}{\partial Pr_n}}{(\frac{Pr_P(Pr_n)}{Pr_n})}$ of $Pr_P(Pr_n)$ is higher than 1, the expected utility of P decreases with P_n. If the elasticity of $Pr_P(Pr_n)$ is lower than 1, the expected utility of P increases with Pr_n.

If the conditions of Proposition 2 hold and the ineffectiveness of the efforts of P increases with the strength of the militants, G assigns a higher probability to P making an effort to suppress the militants, as the strength of the militants increases. G is more reluctant to react even if attacked, as G's belief that P is making an effort against the militants is higher. This is a positive effect on P's utility. However, the stronger the militants, the higher the probability of successful attacks against G, and consequently, of G's reaction, which negatively affects the utility of P. As a combination of these two effects, if $Pr_P(Pr_n)$ increases sufficiently slowly with Pr_n (the negative effect is weaker), the utility of P increases.

3 Conclusion

A government negotiating with a non-state military organization faces a dilemma if the terrorists succeed in launching an attack against the government and the state, despite negotiations: to react violently, or to maintain the negotiation process? Also, what is the strategy of the relatively moderate "politicians?" My model predicts that it may be the case that "politicians" are better off as extremist "militants" are stronger. Therefore,

in a pre-negotiation period, the "politicians" may act to strengthen the "militants," for example, by delivering weapons to them, which endangers the negotiation process. However, the politicians' ability to improve their utility by enhancing the militants' strength is limited. For militants of a sufficiently high strength, a condition of Proposition 2 ($Pr_P(Pr_n) - Pr_G < c_G$) may be violated. Furthermore, if the cost c_G of the government's reaction is sufficiently low, the conditions of Proposition 2 do not hold, and there is no incentive for P to want the militants to be stronger.

My model can also be applied to problems other than those related to national security issues. Consider an organization and its management, G, and the manager of some project, P. P decides whether to invest a costly effort in the project. The project has some probability of failure, which is lower if effort is invested by P. If the initial phase of the project fails, G can fire P (r). In this case, Pr_n can be interpreted as the initial complexity of the project. It may be the case that P is better off as the complexity of the project increases.

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Appendix

Proof of Proposition 1. G prefers r in step 3 of Γ if

$$1 - Pr_G - c_G \geq Pr(e|a)[1 - Pr_P] + (1 - Pr(e|a))[1 - Pr_n]. \tag{3}$$

By (3), if $c_G > Pr_n - Pr_G$, G plays nr, disregarding its belief $Pr(e|a)$. If $c_G < Pr_P - Pr_G$, r is G's best reply for every $Pr(e|a)$.

P prefers e to ne if

$$-c_P + Pr_P(1 - Pr_r) + 1 - Pr_P \geq Pr_n(1 - Pr_r) + 1 - Pr_n,$$

which is equivalent to

$$Pr_r(Pr_n - Pr_P) \geq c_P. \tag{4}$$

For $c_P > Pr_n - Pr_P$, P prefers ne, disregarding Pr_r. If $0 < c_P < Pr_n - Pr_P$ and $Pr_P - Pr_G < c_G < Pr_n - Pr_G$, there is no pure strategy equilibrium. Suppose, on the contrary, that P chooses e, then by (3), G plays nr; however, by (4), P prefers ne.

Similarly, pure ne, r, or nr strategies are not played in an equilibrium. Therefore, equality holds in (4), and thus,

$$Pr_r = \frac{c_P}{Pr_n - Pr_P}. \tag{5}$$

By (3),

$$Pr(e|a) = \frac{Pr_n - Pr_G - c_G}{Pr_n - Pr_P} \tag{6}$$

□

Proof of Proposition 2. The conditions of Proposition 1, part 4 hold; therefore, G reacts with probability (5). The expected utility of P in this equilibrium is $1 - P_n \cdot P_r$, and the result is straightforward. □