



Discussion Paper Series

2003 – 10

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Foreign Aid Designed to Diminish
Terrorist Atrocities can Increase Them*

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* We thank John Bennett and Jorge Restrepo for valuable conversations.

Abstract

A domestic power faces an enemy and commits terrorist atrocities to increase the likelihood of victory. A foreign patron can grant aid to the power but prefers fewer or no atrocities. The domestic power responds by acquiescing in the creation of uncontrollable paramilitaries that commit even more atrocities. Once the paramilitaries are set up, aid flows and the atrocity level is high. Now suppose the foreign patron is uncertain whether the domestic power can control the paramilitaries. At a pooling equilibrium the domestic power will commit more atrocities than it would commit in isolation to demonstrate to the foreign patron that the paramilitaries are beyond the domestic power's control. Case studies of Colombia, Northern Ireland, and Middle East illustrate the models.

JEL Numbers: D74, D82, N4

1. Introduction

Parties to a military conflict are often aligned with outlaw paramilitaries that use terror to increase the likelihood of victory. A government might fight a rebellion with conventional military tactics while paramilitaries simultaneously terrorize rebel sympathizers. In other cases it is the rebels who are aligned with the paramilitaries, with paramilitary atrocities serving to demoralize the established government's supporters. A foreign patron may want to aid one side of a conflict but also want to minimize the terrorism committed on behalf of its side. As an example, consider the Colombian government, which along with seemingly independent paramilitaries, has long fought a rebel opposition; the United States assists the government but tries to rein in the paramilitaries (section 5a). We will consider several conflicts, and they all involve four parties: a primary domestic power, explicitly or implicitly allied paramilitaries, an enemy, and a foreign patron that backs the domestic power.

Why are paramilitaries so common? Can foreign aid be designed to discourage paramilitary atrocities? Is it possible that such aid will backfire and instead increase atrocities? Why is it often unclear if paramilitaries are pawns of the military or are genuinely independent?

We address these questions in a model where a domestic power can improve its chances of victory over a rebel insurgency by committing terrorist atrocities. Since, however, the government or its constituents disapprove of atrocities it must judge the tradeoff between likelihood of victory and respecting human rights. A foreign patron wants the domestic power to prevail and considers granting aid, but it is more averse to human rights abuses than the domestic power – perhaps the foreign patron is pressured by a human rights lobby. The foreign patron therefore places low-atrocity conditions on its aid. The status quo of the model will be for the domestic power and the foreign patron to come to a Nash bargaining compromise that splits the difference between their objectives. But the domestic power may be able to do better by creating (or not preventing the creation of) independent paramilitaries that are even less atrocity averse than it is. Once the

paramilitaries are established and beyond the control of the domestic power, there is nothing for the domestic power and the foreign patron to bargain over: the domestic power now cannot lower the atrocity level but since aid still raises the probability of victory the foreign power will grant it. The paramilitary option can appeal to the domestic power because it can thereby receive aid without the human rights attachments that it may see as crippling. The paramilitaries will fight a more vicious war than is first-best for the domestic power, but the domestic power may well prefer this to the Nash compromise. Thus, the mere existence of a foreign backer with human rights concerns can lead to greater terrorist violence. If an equilibrium where paramilitaries are set up, the outcome will likely leave the foreign patron worse off than if it had never considered the possibility of aid; but once the paramilitaries exist, the foreign patron will go forward with aid. We illustrate this model with case studies of the Colombian civil war and the conflict in the Northern Ireland in the 1960's-1970's.

One implication of this model is that atrocities will “overshoot”: after the domestic power creates (or allows the creation of) independent paramilitaries it then reverses course and seeks to reduce paramilitary abuses. This result can resolve some characteristic disagreements about paramilitaries in which one camp hostile to the domestic power sees the paramilitaries as mere pawns of the domestic power and another camp supportive of the domestic power sees the paramilitaries as independent. Our theory, which implicates the domestic power at the paramilitaries' formative stage but disconnects the two thereafter, suggests that each side is recognizing half the truth.

But sometimes, even if the blinders of partisanship were put aside, the independence of the paramilitaries would remain subject to doubt. We consider how this uncertainty is perpetuated and can even contribute to terrorist violence in a second model in which the foreign patron does not know *ex ante* if the domestic power can control a preexisting paramilitary force. We continue to assume that the foreign patron is more atrocity averse than the domestic power but add that the

foreign patron is more concerned about atrocities committed by a force that it directly or indirectly funds. In the first of two periods the domestic power and the paramilitaries select an atrocity level with its associated probability of victory. In the second period the foreign patron makes its aid decision and a new atrocity level is chosen. We show there can exist a pooling equilibrium in which aid flows and the domestic power will, even when it can control the paramilitaries, choose the same high atrocity level that independent paramilitaries would choose. As the equilibrium plays out, either the paramilitaries really are uncontrollable and abusing human rights of their own accord or the domestic power can control the paramilitaries but is allowing or ordering them to commit atrocities beyond the government's preferred point merely to maintain the foreign patron's uncertainty about whether the paramilitaries are indeed independent. Thus, once again greater violence flows from the foreign patron's reluctance to be implicated in human rights abuses. We apply this model to the Israeli-Palestinian conflict and to a later episode of the Northern Ireland conflict.

A substantial literature now applies rational choice models to civil conflict. Important early contributions include Tullock (1971), Roemer (1985), Grossman (1991 & 1994), Hirshleifer (1991), Skaperdas (1992) and Horowitz (1993). These papers view conflict as a struggle over resources and focus on two-sided conflicts – the rebels versus the government – and do not consider paramilitaries. Aside from introducing a paramilitary dimension to conflict, our paper departs from the existing literature by abstracting from what the parties are fighting for, e.g., the struggle over resources, focusing instead on the place of violent tactics in the conduct of war. Foreign aid has been peripheral to the existing literature but has been considered in, e.g., Grossman (1999) and Arcand and Chauvet (2001), which analyze the effect of foreign aid on the likelihood of civil war as well as the probability of government victory in the event of war. We consider how foreign aid simultaneously affects the probability of victory and the perpetration of atrocities.

A related literature concentrates on international conflict, the determinants of military

spending, and on factors that can stimulate or avoid conflict (Brito and Intriligator (1985), Bueno de Mesquita and Lalman (1990), Garfinkel (1990 & 1994), Wagner (1991), Lapan and Sandler (1993), Overgaard (1994), Hess and Orphanides (1995 & 2001), Fearon (1997), Schultz (1998) and Smith (1998)).¹ Although foreign aid and paramilitaries again are not part of the discussion, information transmission does play a major role in this literature: leaders signal their toughness, competence or domestic backing during war or other crises, or they may even initiate hostilities as a signal to a domestic electorate. In our paper, domestic powers do not deploy violence to separate but as a pooling device to trick foreign patrons into believing that paramilitaries are beyond their control; and this difference of emphasis makes sense given the stigma of terrorist violence. Glaezer (2002) also studies the place of misinformation in fueling conflict; hatred of a group is driven by politicians' supply of stories about supposed crimes committed by the group and has little to do with the actual history of the group.

The essays collected in Breton, Galeotti, Salmon and Wintrobe (2002) initiate research into political extremism from a public choice point of view, although, again, none of the contributions resembles our four-party set-up. The most relevant paper is Ferrero (2002), which studies the relationship between the insiders and outsiders of a revolutionary movement, and shows that these groups can react to success by radicalizing themselves, thus encouraging exit and allowing the remaining members to enjoy more of the fruits of their labor.

Following the exposition of our model, we present four case studies as illustrations. By reinterpreting the identity of the four parties to a conflict and what foreign aid consists of, we can cover a wide array of examples.

¹ Garfinkel and Skaperdas (1996) and Sandler (2000) both collect essays on rational conflict theory.

2. The technology and preferences of conflict, and a puzzle

A domestic power faces an enemy, perhaps a rebel insurgency or an established government that it wishes to overthrow. Terrorist atrocities directed against the opponent will raise the probability of victory, either by the direct military consequences of the atrocities or by demoralizing the enemy. But political powers rarely aim monomaniacally for victory; there are limits on the tactics they will adopt. Rather the domestic power has preferences that weigh the tradeoff between terrorist tactics and the probability of victory. A foreign patron may also want the domestic power to be victorious and therefore seek to strengthen the domestic power's military efforts. But the foreign patron's preferences on the terrorism-probability of victory tradeoff are likely to differ; its distance from the scene, its other geopolitical concerns, or its views on the ethics of terrorism can lead the foreign patron to prefer a lower atrocity level than the domestic power would choose on its own. As we will see, this conflict of aims precipitates a strategic conflict between the domestic power and the foreign patron.

We model the technology that connects atrocities to the probability of victory over the enemy with a production possibilities set $X \subset \mathbb{R}_+ \times [0, 1]$: $(a, \pi) \in X$ means that the atrocity level a is consistent with the probability of victory π . In some applications, it is natural to interpret π as the *extent* of victory, e.g., the amount of territory won, not as a probability of victory. We assume that X is compact and convex. If we reverse the measurement of atrocities, so that smaller atrocity levels are to the right of larger atrocity levels on the horizontal axis, then X has the traditional shape of a production possibilities set (see Figure 1).

The production possibilities set X depends on the level of aid from the foreign patron. As we will see in the applications, aid can take many different forms, e.g., money, military aid, diplomatic support. We label the initial aid level as 0 and, to simplify, suppose that the foreign patron considers just one other aid level $F > 0$. When we need to indicate the dependence of X on the aid level, we write $X(0)$ or $X(F)$. We assume that greater aid expands the production

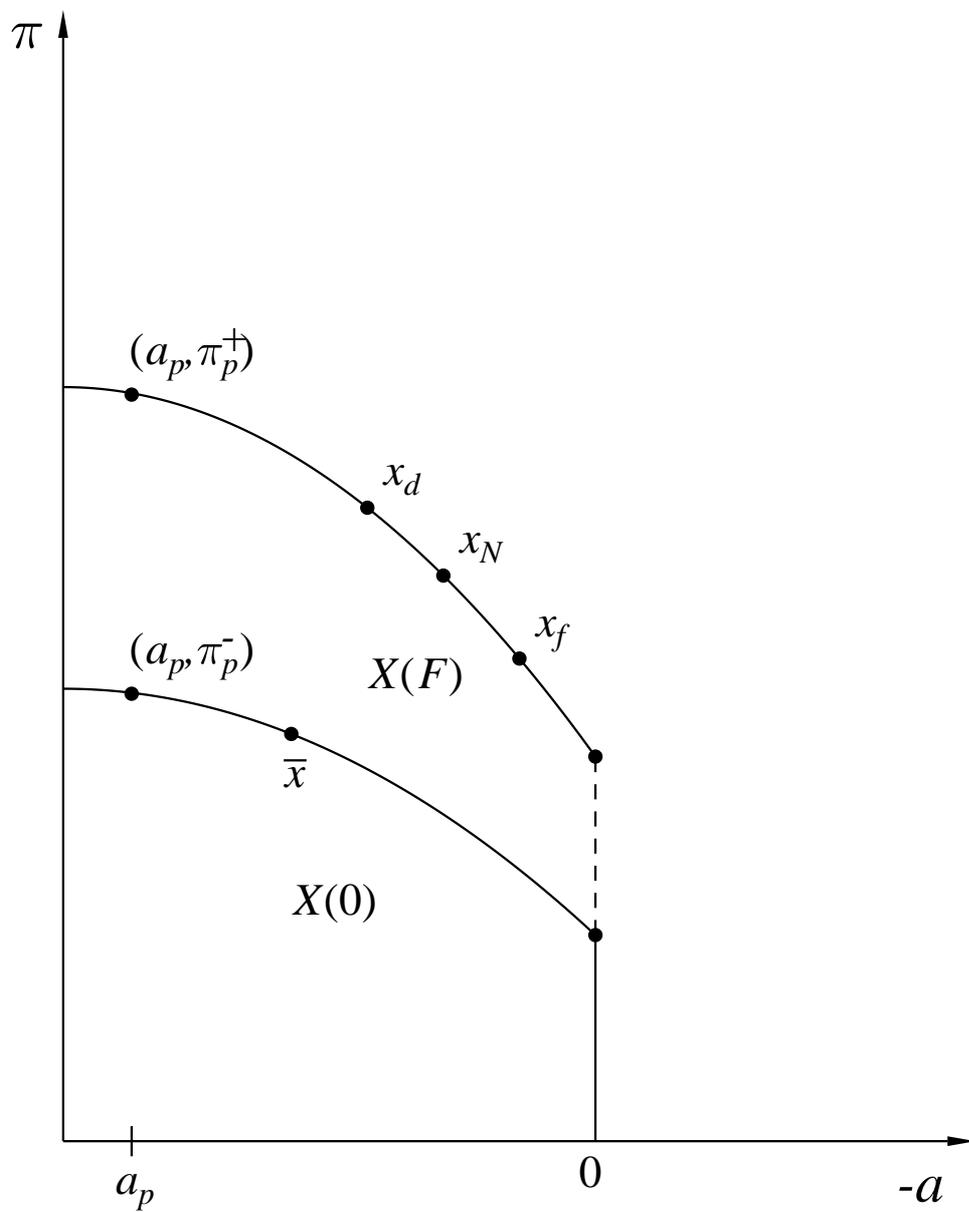


Figure 1

possibilities set: if $(a, \pi) \in X(0)$, then there exists a $\pi' > \pi$ such that $(a, \pi') \in X(F)$.

Both the foreign patron and the domestic power have preferences over $R_+ \times [0, 1]$, the space of atrocity levels and victory probabilities, represented by the utility functions u_f and u_d respectively, each of which we assume is concave, strictly increasing in π , and strictly decreasing in a . Prior to the introduction of foreign aid, the domestic power maximizes u_d subject to the constraint $(a, \pi) \in X(0)$. Under our assumptions, this problem has a solution, one of which, $\bar{x} = (\bar{a}, \bar{\pi})$, we consider the status quo.

The conflict between the domestic power and the foreign patron lies in the difference between their preferences: we assume the domestic power's preferred point in $X(F)$, say $x_d = (a_d, \pi_d)$, has a higher atrocity level and higher probability of victory than the foreign patron's preferred point, say $x_f = (a_f, \pi_f)$. That is, $a_d > a_f$ and $\pi_d > \pi_f$ (see Figure 1). This difference may be due to the foreign patron having a greater intrinsic distaste for atrocities. But, although some slight alterations to the model would be needed to express this formally, it could be that the domestic power and the foreign patron both want to maximize the probability of victory but disagree about the shape of the PPF (the boundary of X): maybe the foreign patron but not the domestic power believes that increases in a are eventually counterproductive and decrease π or believes that this backward-bending stretch of the PPF begins at a smaller a .

A puzzle. The technique of defining preferences and technology over a space of atrocities and victory probabilities has applications beyond the analysis of paramilitaries that forms our main topic. Consider a domestic power confronting an enemy who has become more resistant to the demoralization that terrorism aims to induce. Although it is common to think that “tough” enemies who achieve a greater will to resist ultimately prevail and discourage terrorist atrocities, our simple framework indicates that other conclusions are possible. We may picture greater enemy resistance as a move to a lower and flatter PPF: a greater a now induces a smaller increase in π . While it is true that the substitution effect by itself will lead a domestic power to decrease

atrocities, the income effect presumably operates in the opposite direction (we put aside any complications due to a foreign patron). A more desperate domestic power will not be able to indulge its preference for fewer atrocities. Indeed, if the PPF is linear and the domestic power has Cobb-Douglas preferences, a tougher enemy will not cause any change in the domestic power atrocity level (see Figure 2). We will return to this puzzle in section 4.

3. Atrocity delegation: paramilitaries as a negotiating tactic and atrocity overshooting

Foreign aid, by enlarging the production possibilities set, can in principle benefit both the domestic power and the foreign patron in their effort to defeat their enemy. But the domestic power can resort to various ploys to capture the lion's share of the gains. It is here that the fourth party of the model enters the picture: the domestic power can set up (or stop suppressing) independent paramilitaries that are even less averse to committing atrocities than it is. So now three groups – in order of increasing atrocity aversion: the foreign patron, the domestic power, and the paramilitaries – are arrayed against a common enemy. From the vantage point of the domestic power and the foreign patron, the paramilitaries' atrocities will be strategically precommitted, leading the interests of the domestic power and the foreign patron now to align. Thus, by setting up paramilitaries over which it has no control, the domestic power can evade the need to forge a compromise with the foreign patron.

Before turning to paramilitaries, consider first the benchmark where the domestic power and the foreign patron must negotiate an agreement on atrocity levels. If the gains from foreign aid are divided according to Nash bargaining, the threat or disagreement point would occur at the utilities $u_f(\bar{x})$ and $u_d(\bar{x})$. Nash bargaining then leads to the $x \in X$ that maximizes

$$(u_f(x) - u_f(\bar{x}))(u_d(x) - u_d(\bar{x}))$$

subject to $u_f(x) \geq u_f(\bar{x})$ and $u_d(x) \geq u_d(\bar{x})$. The maximum, which we denote $x_N = (a_N, \pi_N)$, necessarily lies on the frontier of $X(F)$ between x_d and x_f (possibly equal to either x_d or x_f).

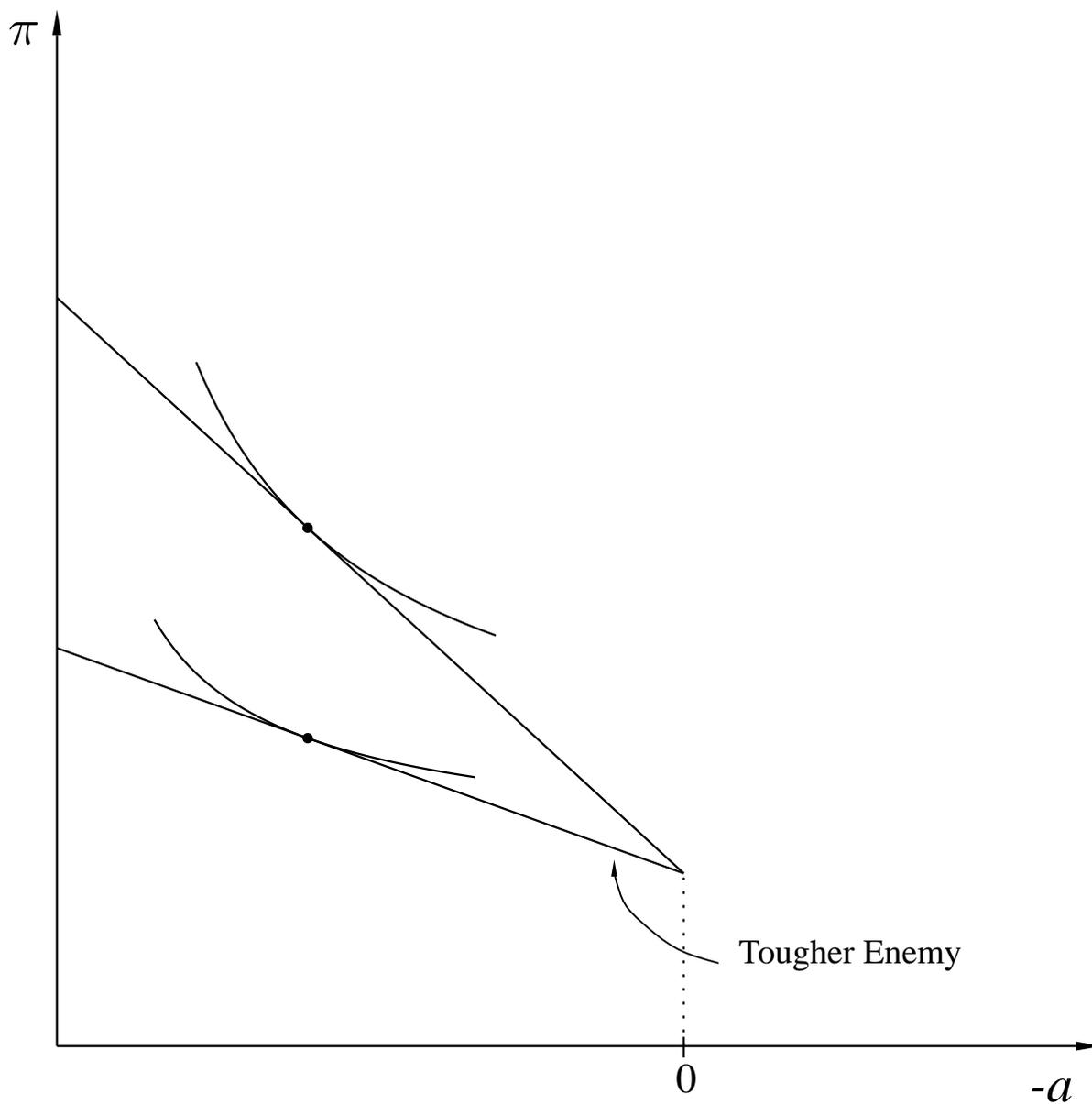


Figure 2

It can in principle occur that the granting of foreign aid will lead to an increase in atrocities: $a_N > \bar{a}$. Given our assumption that each party's utility is both continuous and strictly increasing in π , a sufficiently large increase in π can always compensate for a small enough increase in a . So, if the expansion of X induced by foreign aid allows a substantial increase in π but only when a increases, then conceivably both the domestic power's and the foreign patron's preferred points in $X(F)$, a_d and a_f , will be larger than the status quo \bar{a} .² If that were to happen, then a_N would also have to increase relative to \bar{a} . But we regard this case as the less likely possibility. For instance, suppose that the PPF is linear with a slope that does not change when foreign aid is granted. Then any condition that implies that π and $-a$ are both normal (positive income effect) goods, e.g., that utility is additively separable in π and a , also implies $a_d < \bar{a}$. Substantive considerations back up this argument: it is presumably a domestic power with few alternatives or on the verge of defeat that would resort to atrocities and so foreign aid is likely to reduce the magnitude of increases in a that the domestic power is willing to trade for a given increase in π . If, for whatever reason, $a_d < \bar{a}$ – which we call the *normal case* – it then follows that $a_N < \bar{a}$. In the normal case, therefore, Nash bargaining leads to both a reduction in atrocities and an increase in the likelihood of victory: foreign aid achieves its objective.

Now suppose that prior to the cooperative bargaining game, the domestic power can set up or fund independent paramilitaries whose actions it will not be able subsequently to control. Or perhaps the domestic power could just cease policies that so far have prevented the establishment of paramilitaries. To keep the model pared down, we assume that any paramilitaries simply commit some fixed atrocity level a_p larger than \bar{a} or a_d and engage in no other types of combat. One possibility is that atrocities lead to no disutility for the paramilitaries: they only wish to maximize the probability of victory π and therefore commit the highest atrocity level they are

² No condition on utility functions alone can exclude this possibility: for any utility u meeting our assumptions, there exist a $X(0)$ and $X(F)$ meeting our assumptions such that $\operatorname{argmax} u(x)$ s.t. $x \in X(F)$ has a larger a coordinate than $\operatorname{argmax} u(x)$ s.t. $x \in X(0)$.

capable of (so long as a has not passed a point at which further increases in a lower π). The domestic power could also have no intrinsic objection to atrocities. But, just as with the case of the domestic power and the foreign patron, the domestic power and the paramilitaries could disagree about what point in X maximizes π : compared to the paramilitaries, the domestic power might believe that at a relatively small value of a further increases in a are counterproductive and lead to a decrease in π (see the Israeli-Palestinian case study in section 5(d)).

The presence of independent paramilitaries truncates the production possibilities set: only points to the left of a vertical line through a_p in Figure 1 can then be achieved. Notice that we have assumed implicitly that paramilitary atrocities have the same causal effect on π as domestic power atrocities. We could refine the model by letting the identity of those committing atrocities alter the sets $X(0)$ and $X(F)$. These alterations are likely to be ambiguous however. Perhaps paramilitaries can conduct more effective terrorism, but it may also, due to poor coordination with the traditional military's combat operations, introduce inefficiency.

Given the establishment of the paramilitaries, the preferences of the domestic power and the foreign patron coincide. With a lower bound on atrocities already set at a_p , both the domestic power and the foreign patron – due to the monotonicity of their preferences and since $a_p > a_d > a_f$ – prefer π to be as large as possible and desire no further increase in a . So, when the two parties bargain over aid and atrocity levels, no conflict of interest arises: they will agree that aid F should be granted, allowing the maximal π in $X(F)$ consistent with a_p , π_p^+ in Figure 1, to be achieved rather than the no-aid probability, π_p^- in Figure 1.

When deciding whether to set up (or turn a blind eye to the emergence of) paramilitaries, the domestic power will anticipate that the existence of the paramilitaries will lead to the allocation $x_p^+ = (a_p, \pi_p^+)$. Hence if the domestic power prefers x_p^+ to x_N , it will let the paramilitaries come into existence. Since we have assumed that $a_p > \bar{a}$, the atrocity level will then rise relative to the original status quo. In addition, the foreign patron may well prefer the status quo point \bar{x} to the

new equilibrium point x_p^+ . But the foreign patron has no credible threat that can prevent the inferior allocation from occurring. The logic of backward induction will undercut any attempt to deny aid; the domestic power, relying on the monotonicity of the foreign patron's preferences, knows that aid will be forthcoming once the paramilitaries are a *fait accompli*.

Theorem 1. If the domestic power prefers the paramilitary optimum x_p^+ to the Nash bargaining solution x_N , it will set up independent paramilitaries. Relative to the status quo, atrocities will increase and the foreign patron's welfare can fall.

It is the very existence of a foreign patron that might aid the domestic power that can potentially lead to the increase in atrocities. If the domestic power did not consider foreign aid a possibility, it would settle on the lower atrocity level \bar{a} . But once the foreign patron enters the picture as a possible donor, the higher atrocity level a_p can arise – despite the fact that the foreign patron is the most atrocity averse of all the concerned parties.

Atrocity overshooting. One interesting consequence of the atrocity delegation model is a reversal through time in the domestic power's attitude to a marginal increase in atrocities. Prior to the set-up of the paramilitaries, the atrocities that do occur may be conducted by a group (e.g., a secret police force) that keeps its distance from the official government. Since the domestic power is achieving its target atrocity level, the government will not crack down on this quasi-independent party – indeed the domestic power may funnel resources to it. But once truly independent paramilitaries have come into being, the atrocity level overshoots to a_p and the domestic power will now prefer a decrease. A marginal decrease in atrocities then has positive value and the domestic power will devote resources to limit the paramilitaries' activities. In both our atrocity-delegation case studies in section 5, we see precisely this pattern: initial support for atrocity-committing groups followed by systematic attempts to suppress them.

4. Atrocity pooling: the incentive to mimic paramilitary atrocities

The atrocity delegation model supposes that once paramilitaries are set up they lie beyond the domestic power's control. Frequently, however, the independence of paramilitaries is open to doubt, and so we assume now that paramilitaries exist at the onset of the model but the foreign patron is uncertain whether or not they are beyond the control of the domestic power. If the foreign patron were certain that the paramilitaries could be reined in by the domestic power, then it presumably could break out of the backward induction straightjacket and perhaps even return to the Nash solution x_N . But as long as the independence of the paramilitaries remains a positive-probability possibility, it is unclear how an agreement between the domestic power and the foreign patron to lower atrocities below a_p could be binding. We instead consider an alternative device that can mediate between the conflicting interests of the two players: that their interactions are repeated rather than one-shot. Repetition brings out several complexities in the players' strategic relationship. Although the foreign patron will no longer bargain cooperatively to achieve its ends, it can instead punish a domestic power that backs terrorism by withholding aid. But as we will see, if the foreign patron does not in equilibrium fund a domestic power that it knows could prevent paramilitary atrocities, the domestic power again has an incentive to increase atrocities beyond what it would itself prefer, now for the sole purpose of convincing the foreign patron that it is not responsible for the many atrocities that do occur and indeed that it is powerless to stop them. As with atrocity delegation, the very attempt of the foreign patron to limit atrocities can boomerang and increase them.

In applications, interactions between the domestic power and the foreign patron would continue through many time periods, but the relevant strategic issues emerge even in the simplest setting where after one period of observing the atrocity level chosen by the domestic power and the paramilitaries, the foreign patron decides whether to grant aid. Following this decision, the domestic power and paramilitaries again determine an atrocity level. The per-period utility

functions will satisfy the assumptions of sections 2 and 3 (with one amendment on u_f to be added presently) and each party's overall utility will equal the sum of its utilities in the two periods.

Think of the conflict between the domestic power and its opponent as being resolved with probability .5 each period with π being the probability of domestic power victory in the event the conflict is resolved (we thus ignore the complication that a higher π in period one would likely lower the chances that the conflict persists into period two). The technology linking atrocities to the probability of victory in each period also repeats that of the previous model. This last requirement is a simplification: presumably a higher probability of victory in the first period will, for any given second-period atrocity level, raise the probability of victory in the second period.

A mere change to multiple periods will not by itself overturn the force of backward induction. If in the final period, the paramilitaries can in fact be controlled by the domestic power, then the domestic power will choose the allocation x_d if aid is granted and \bar{x} if aid is not granted. If the normal case $a_d < \bar{a}$ obtains (see section 3), then the foreign patron, again due to the monotonicity of its preferences, will grant aid. Thus, when the paramilitaries are controllable, the domestic power can use its capacity to choose atrocity levels after aid is set to achieve its most preferred allocation x_d in the final period rather than the Nash compromise x_N that arose in the previous section. Since this outcome obtains in the final period independently of what actions are taken in prior periods, the domestic power has no incentive to diminish atrocities in the immediately preceding period either. By backward induction, this conclusion continues to hold in all stages of any finite-period model. But note the one difference that even though the foreign patron does not achieve an atrocity level of a_N or lower, at least atrocities fall relative to the original status quo level \bar{a} , again assuming the normal case obtains.

To give the foreign patron a credible threat, we must take another step towards realism and recognize that the foreign patron may be more averse to atrocities when they are committed by a force it is funding than by a force to which it is not linked. The foreign patron does not want

“blood on its hands.” Curiously, the very fact that the foreign patron has a threat in hand can induce the domestic power to manipulate the foreign patron by committing more atrocities than the status quo level \bar{a} it would normally commit.

Our specific assumption will be that the welfare of the foreign patron is affected by whether or not it is culpable for atrocities: when atrocities are committed by either the domestic power or its paramilitary pawns *and* the domestic power receives foreign aid, then the foreign patron is *culpable*, whereas if atrocities are committed by a domestic power that does not receive foreign aid *or* by independent paramilitaries, then the foreign patron is *inculpable*. Consequently, the preferences of the foreign patron are now represented by a von Neumann-Morgenstern utility u_f that in addition to taking π and a as arguments is also a function of a binary variable, c or i , that denotes culpability or inculpability. We assume that $u_f(a, \pi, c) < u_f(a, \pi, i)$ for any $\pi \geq 0$ and $a > 0$.

The game played by the domestic power and the foreign patron is depicted in the tree in Figure 3. At the beginning of the game, paramilitaries already exist and nature selects with probability q that the paramilitaries are controllable and probability $1 - q$ that they are not controllable. The domestic power observes nature’s selection, but the foreign patron does not. If the paramilitaries are controllable, the domestic power can choose any nonnegative atrocity level, while if the paramilitaries are not controllable the domestic power can only add atrocities to the a_p level that independent paramilitaries always commit. In the controllable case, keep in mind that the domestic power need not itself commit the atrocities; it can just refrain from keeping the paramilitaries in check. To simplify a little, we consider only points on the production possibilities set that are undominated – so, once a is determined the probability of victory will equal the maximum π subject to (a, π) being an element of $X(0)$ or $X(F)$. Following this initial-round determination of a , the foreign patron decides whether to grant aid and then a second-round selection of a occurs, where again, if the paramilitaries are controllable, the domestic power can

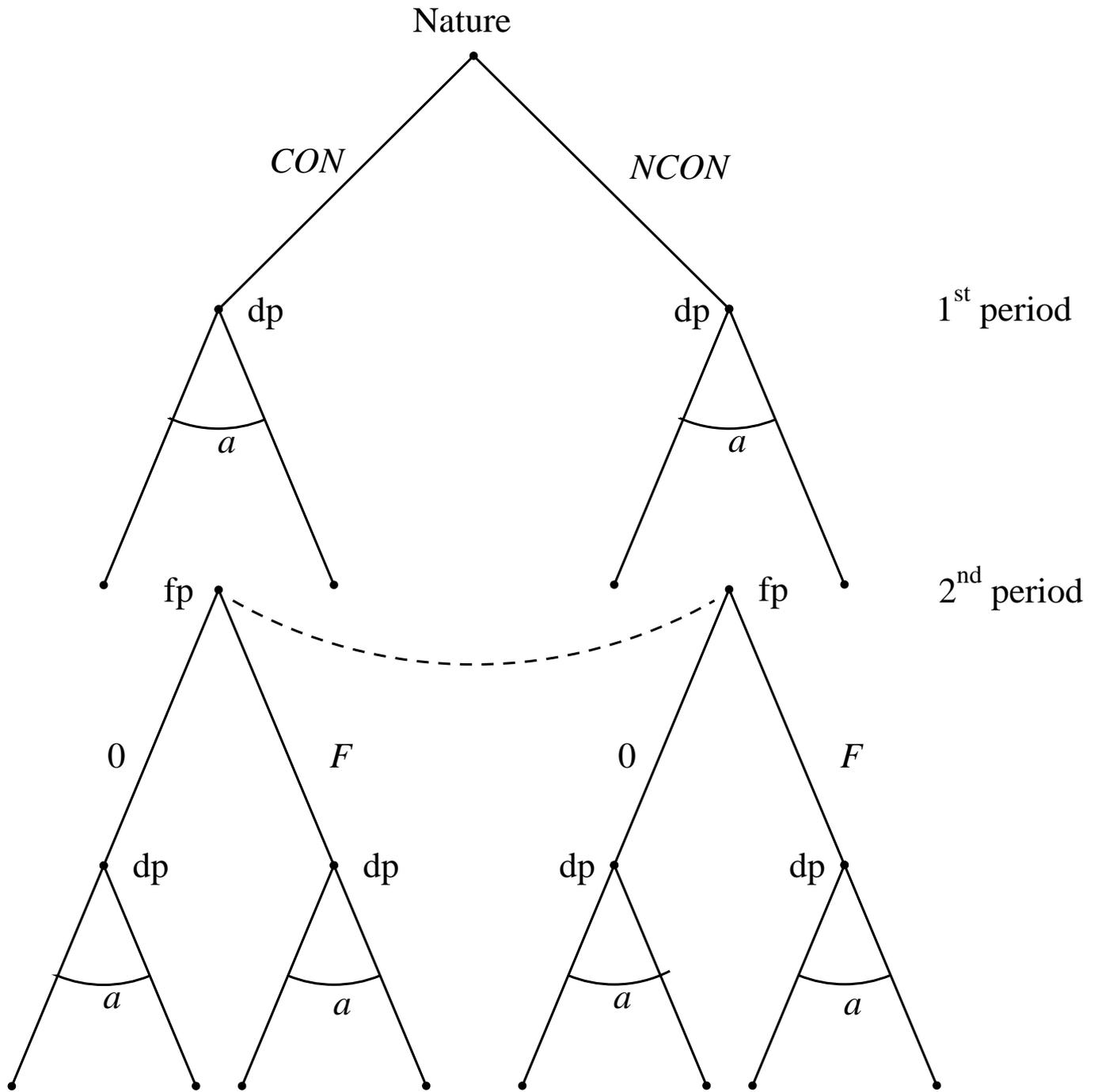


Figure 3

choose an arbitrary atrocity level but otherwise can only add to the a_p that the paramilitaries commit.

For the domestic power, a strategy consists of the two triples $(a^1, a^2(0), a^2(F))^{con}$ and $(a^1, a^2(0), a^2(F))^{ncon}$, each specifying a first-period atrocity level, a second-period atrocity level if the foreign patron does not grant aid, and a second-period atrocity level if the foreign patron does grant aid, the first triple for when the paramilitaries are controllable and the second for when the paramilitaries are not controllable. We adopt the notation that the atrocity levels in the domestic power's strategies are total atrocities, not just the incremental atrocities beyond those the paramilitaries commit. For the foreign patron, a strategy is a decision to provide the aid level F or 0 as a function of the observed first-period atrocity level, $f(a^1)$. Note that while the foreign patron makes its aid decision as a function of the first-period atrocity level that it observes, denoted a^1 , a strategy for the domestic power specifies two first-period atrocity levels, $(a^1)^{con}$ and $(a^1)^{ncon}$.

In making its aid decision, the foreign patron uses the information it garners from observing the initial-period atrocity level a^1 . We will say that the foreign patron's updating rule for the posterior probability that the paramilitaries are controllable, $q_{pos}(a^1)$, is *admissible* if

- $a^1 < a_p \Rightarrow q_{pos}(a^1) = 1$,
- $a^1 = (a^1)^{con} = (a^1)^{ncon} \Rightarrow q_{pos}(a^1) = q$,
- $a^1 > a_p, (a^1)^{con} \leq a_p, (a^1)^{ncon} = a_p \Rightarrow q_{pos}(a^1) \leq q$.

The logic of the first two rules is clear: since noncontrollable paramilitaries automatically commit a_p atrocities, observation of a lower atrocity level implies the paramilitaries must be controllable, and if both controllable and noncontrollable paramilitaries induce the same atrocity level in equilibrium, then observation of that level leads to no revision of q . The third rule states that if in equilibrium controllable paramilitaries induce an atrocity level no larger than a_p and noncontrollable paramilitaries induce an atrocity level a_p but the foreign patron observes $a^1 > a_p$, then the foreign patron will not revise upward its probability that the paramilitaries are

controllable. Given the posited equilibrium, $a^1 > a_p$ is a 0-probability event, but if it occurs the atrocity level when the paramilitaries are not controllable is at least as near to a^1 as the atrocity level when the paramilitaries are controllable; so it is reasonable that the foreign patron's estimate of the probability that the paramilitaries are controllable would not go up.

A *Bayesian perfect equilibrium* consists of strategies for the two players such that (1) there does not exist a deviation at any node assigned to the domestic power that increases the domestic power's utility in the subgame that follows that node, and (2) the foreign patron's strategy maximizes its expected utility, calculated according to some admissible updating rule.

To pin down when the foreign patron's behavior will increase atrocities, let us say that the foreign patron is *culpability averse* and *strongly desires victory if inculpable* if, respectively, the inequalities,

$$u_f(\bar{a}, \bar{\pi}, i) \geq u_f(a_d, \pi_d, c),$$

and

$$qu_f(a_d, \pi_d, c) + (1 - q)u_f(a_p, \pi_p^+, i) \geq qu_f(\bar{a}, \bar{\pi}, i) + (1 - q)u_f(a_p, \pi_p^-, i),$$

are satisfied. The label for the first inequality is self-explanatory: culpability aversion obtains if the foreign patron's dislike of culpability is powerful enough to outweigh a move from the status quo to x_d (which by itself would presumably be utility increasing). The label for the second inequality is due to the fact that we will assume both inequalities hold simultaneously; since the first inequality works against the second, it must be, if the second inequality is to hold, that $u_f(a_p, \pi_p^+, i)$ is sufficiently larger than $u_f(a_p, \pi_p^-, i)$ or q is sufficiently small. Finally define the domestic power to be *atrocity tolerant* if

$$u_d(a_p, \pi_p^-) + u_d(a_d, \pi_d) \geq u_d(\bar{a}, \bar{\pi}) + u_d(\bar{a}, \bar{\pi}).$$

Since for the domestic power $(\bar{a}, \bar{\pi})$ is maximal in $X(0)$ and (a_d, π_d) is maximal in $X(F)$, the inequalities $u_d(\bar{a}, \bar{\pi}) \geq u_d(a_p, \pi_p^-)$ and $u_d(a_d, \pi_d) \geq u_d(\bar{a}, \bar{\pi})$ must hold. Atrocity tolerance thus says that the former effect is weak enough for the latter effect to be decisive.

Theorem 2. There is a Bayesian perfect equilibrium at which the domestic power *pools* – chooses the high atrocity level a_p in the initial period whether the paramilitaries are controllable or not – if and only if (1) the foreign patron is culpability averse and strongly desires victory if inculpable, and (2) the domestic power is atrocity tolerant.

Proof. Suppose conditions (1) and (2) obtain. We show that $(a_p, \bar{a}, a_d)^{con}, (a_p, a_p, a_p)^{ncon}, f(a^1) = F$ if $a^1 \geq a_p, f(a^1) = 0$ if $a^1 < a_p$, is a Bayesian perfect equilibrium. That the a^2 components of the domestic power's strategy triples do not allow for a utility-increasing deviation in the second-period subgames is immediate, given that the concavity of u_d and the convexity of X imply that the domestic power prefers a_p to any $a > a_p$. If $a^1 < a_p$, then $q_{pos} = 1$. Hence, given the posited strategy for the domestic power, culpability aversion states that $f(a^1) = 0$ is utility-maximizing for the foreign patron. If $a^1 = a_p$, then $q_{pos} = q$. Again given the domestic power's second-period strategy, strong desire for victory if inculpable states that $f(a_p) = F$ is utility-maximizing. When $a^1 > a_p$, then $q_{pos} \leq q$, and so culpability aversion and strong desire for victory if inculpable imply

$$q_{pos}u_f(a_d, \pi_d, c) + (1 - q_{pos})u_f(a_p, \pi_p^+, i) \geq q_{pos}u_f(\bar{a}, \bar{\pi}, i) + (1 - q_{pos})u_f(a_p, \pi_p^-, i).$$

Hence $f(a^1) = F$ is utility-maximizing.

In the initial period, given that $f(a^1) = 0$ if $a^1 < a_p$ and $f(a^1) = F$ if $a^1 \geq a_p$, atrocity tolerance implies that $(a^1)^{con} = a_p$ gives the domestic power at least as much utility as any $(a^1)^{con} < a_p$. That $(a^1)^{con} = a_p$ gives at least as much utility as any $(a^1)^{con} > a_p$ follows from the fact the domestic power prefers a_p to any $a > a_p$ and that the foreign patron plays $f(a^1) = F$ for $a^1 \geq a_p$. As for $(a^1)^{ncon}$, the optimality of a_p again follows from the fact that the domestic power prefers a_p to any $a > a_p$ and that the foreign patron plays $f(a^1) = F$ for $a^1 \geq a_p$.

Now suppose there exists a pooling equilibrium. If the foreign patron is not culpability averse, then the foreign patron always funds and hence the domestic power would be better off choosing $(a^1)^{con} = \bar{a}$, a contradiction. If the foreign patron does not strongly desire victory if

inculpable, then, given the updating rule, the foreign patron will not fund when $(a^1)^{con} = (a^1)^{ncon} = a_p$, and hence the domestic power is again better off choosing $(a^1)^{con} = \bar{a}$. Finally, if the domestic power is not atrocity tolerant then $(a^1)^{con} = \bar{a}$ is optimal whether or not the foreign patron funds. ■

One may readily show that the pooling equilibrium used in the proof is the unique Bayesian perfect equilibrium if and only if the inequalities given by culpability aversion, strong desire for victory if inculpable, and atrocity aversion are all strict inequalities.

The equilibrium in Theorem 2 displays the hallmark strategic character of pooling. Even when the domestic power can control the paramilitaries it may be in its interest to act as if it cannot since the domestic power thereby minimizes the foreign patron's estimate of the likelihood of being culpable if it provides aid.

The pooling equilibrium does not necessarily increase the atrocities that occur when the paramilitaries are controllable – “controllable atrocities” – compared to a status quo in which during both time periods $(\bar{\pi}, \bar{a})$ occurs when the paramilitaries are controllable. (We may ignore “uncontrollable atrocities” since the same level, a_p , occurs at both the status quo and any equilibrium.) Although the move to a pooling equilibrium leads $(a^1)^{con}$ to rise from \bar{a} to a_p , atrocities in the second period of the pooling equilibrium, a_d , will be smaller than the status quo level \bar{a} if we suppose that the normal case $a_d < \bar{a}$ obtains. Hence total controllable atrocities at the pooling equilibrium, $a_p + a_d$, could conceivably be smaller than total controllable atrocities at the status quo, $2\bar{a}$. But although $a_p + a_d < 2\bar{a}$ is certainly not pathological, it is an artifact of the two period time span of our model. If there were many periods, the domestic power will pool (choose a_p) up until the final period, to maintain the possibility in the foreign patron's mind that the paramilitaries are not controllable. With enough periods, the high pooling atrocities that occur up until the final period will eventually swamp the possibly smaller final-period atrocity level. With a finite number of periods, of course, the domestic power will always choose (a_d, π_d) in the

final period since no aid decision hangs on this choice.

A pooling equilibrium not only can increase controllable atrocities relative to the status quo; it may also lower the welfare of the foreign patron. The foreign patron must be at least as well off in the second period of the pooling equilibrium as with a status quo of $(\bar{a}, \bar{\pi}, i)$ with probability q and (a_p, π_p^-, i) with probability $(1 - q)$ – this is what the foreign patron strongly desiring victory if inculpable states and is necessary for the existence of a pooling equilibrium.

But suppose the foreign patron's utility function satisfies the inequality,

$$u_f(a_p, \pi_p^-, i) < u_f(\bar{a}, \bar{\pi}, i),$$

which is plausible since the domestic power itself prefers $(\bar{a}, \bar{\pi})$ to (a_p, π_p^-) and presumably the foreign patron dislikes atrocities at least as much as the domestic power. It then follows that the foreign patron is worse off in the initial period of the pooling equilibrium:

$$qu_f(a_p, \pi_p^-, i) + (1 - q)u_f(a_p, \pi_p^-, i) < qu_f(\bar{a}, \bar{\pi}, i) + (1 - q)u_f(a_p, \pi_p^-, i).$$

If this effect is sufficiently large, the foreign patron will be worse off overall compared to a world in which aiding the domestic power was for some reason impossible. So, in addition to increasing atrocities, the mere possibility of granting aid can lower the foreign patron's utility.

In a many-period version of a pooling equilibrium, the foreign patron's per-period utility outside of the initial and final period will equal $qu_f(a_p, \pi_p^+, c) + (1 - q)u_f(a_p, \pi_p^+, i)$. Ignoring the ultimately small effect of the final period, this utility level must be at least as great as $qu_f(\bar{a}, \bar{\pi}, i) + (1 - q)u_f(a_p, \pi_p^-, i)$, the per-period utility that would arise if aid were impossible – otherwise the foreign patron will not aid the domestic power. Just as in the two-period model, the foreign patron's initial-period utility will be smaller under pooling than if aid were impossible, but if the discount rate is sufficiently small, this difference has little effect on the foreign patron's total utility. So in a long-run model, the mere possibility of foreign aid typically will usually not diminish the welfare of the foreign patron.

We return briefly to the puzzle, raised in section 2, of why a tough enemy with a relatively

flat PPF should induce fewer atrocities from a domestic power and its paramilitary allies. One possible answer is that a tough enemy can break a pooling equilibrium. A flat PPF means that large increases in a lead to only a small increase in π ; hence the returns drop to the policy of permitting a_p just to pretend the paramilitaries are not controllable, and the domestic power may no longer be willing to pay the price of (a_p, π_p^-) for the benefit of (a_d, π_d) . To be more precise, atrocity tolerance,

$$u_d(a_p, \pi_p^-) + u_d(a_d, \pi_d) \geq u_d(\bar{a}, \bar{\pi}) + u_d(\bar{a}, \bar{\pi}),$$

is less likely to hold after an enemy becomes tougher. We know $u_d(a_d, \pi_d) \geq u_d(\bar{a}, \bar{\pi})$, but now the difference between $u_d(\bar{a}, \bar{\pi})$ and $u_d(a_p, \pi_p^-)$ will be larger, since the difference between π_p^- and $\bar{\pi}$ will have become smaller. Since Theorem 1 specifies necessary as well as sufficient conditions for the existence of a pooling equilibrium, a violation of atrocity tolerance means that a pooling equilibrium cannot exist.

5. Case studies

Four cases studies follow, on Colombia and Northern Ireland as examples of atrocity delegation and Northern Ireland again and the Middle East as examples of atrocity pooling. The atrocity delegation model predicts a specific path of events, allowing for empirical scrutiny at several junctures, while atrocity pooling is inherently more difficult to substantiate. The Colombian case also illustrates the foreign patron's culpability aversion, which, although it is an explicit assumption only in the atrocity pooling model, is a widespread phenomenon.

(a) Atrocity delegation 1: the war in Colombia

The Colombian government, which plays the role of the domestic power, has long struggled to defeat two principal rebel groups, the FARC (Revolutionary Armed Forces of Colombia) and the ELN (National Liberation Army). Various paramilitaries, mostly united under

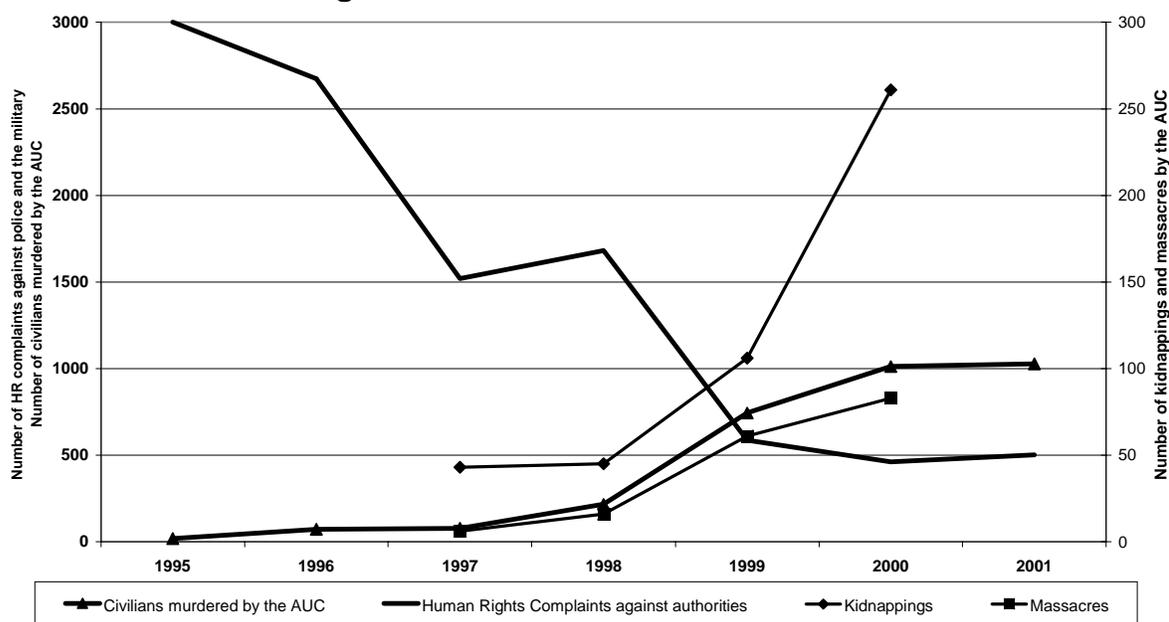
the umbrella organization AUC (United Self-Defence Groups of Colombia), also fight the rebels. The United States serves as the Colombian government's foreign patron.

While both the Colombian military and the AUC militarily engage the rebels, the AUC has been more willing than the official forces to violate human rights (Sweig 2002, p. 126, Shifter 1999, p. 17, Pardo 2000, p. 70 and Amnesty International 1998, p.5). The main US interest, at least in the 1990's, has been to disrupt the cocaine trade, from which the FARC derives substantial income (Rabasa and Chalk 2001, pp. 32-33). Victory over the rebels would deal a severe blow to drug trafficking. The Colombian government also aims to roll back the cocaine business but assigns highest priority to bringing FARC/ELN violence to an end. The immediacy of the rebel threat and of their tactics – e.g., kidnaping for ransom, another major source of rebel financing (Rabasa and Chalk 2001, pp. 33-34) – has led the government to tolerate greater ruthlessness than the US does. The preferences of the domestic power, the foreign patron, and the paramilitaries thus fit the contours of our model.

The Colombian government of the mid-to-late 1990's gave the paramilitaries greater leeway, leading to an upsurge in anti-rebel atrocities. As we will see, and in line with the atrocity delegation model, it is plausible that the Colombians took this step to present the United States with a *fait accompli*: the US then could not compel the Colombian government to curtail anti-rebel atrocities as a precondition for aid.

Although paramilitaries are longstanding in Colombia, they were traditionally local operations connected with drug lords, landowners, regional politicians and the military (Chernick 1998, p. 31). But during the Samper presidency (1994-1998) and the subsequent Pastrana administration (1998-2002), the size and activity of the paramilitaries exploded. With the consolidation of the AUC in 1997, the paramilitaries signaled their ambition to take on the guerillas nationwide, and paramilitary manpower roughly doubled within a few years (Chernick 2001, p. 95). The AUC rapidly established its aggressiveness and willingness to commit atrocities,

Figure 4. Paramilitarization of the war



Source: Ministry of Defence, 2002.

as measured by a variety of indicators including civilians murdered, massacres and kidnappings (Figure 4).

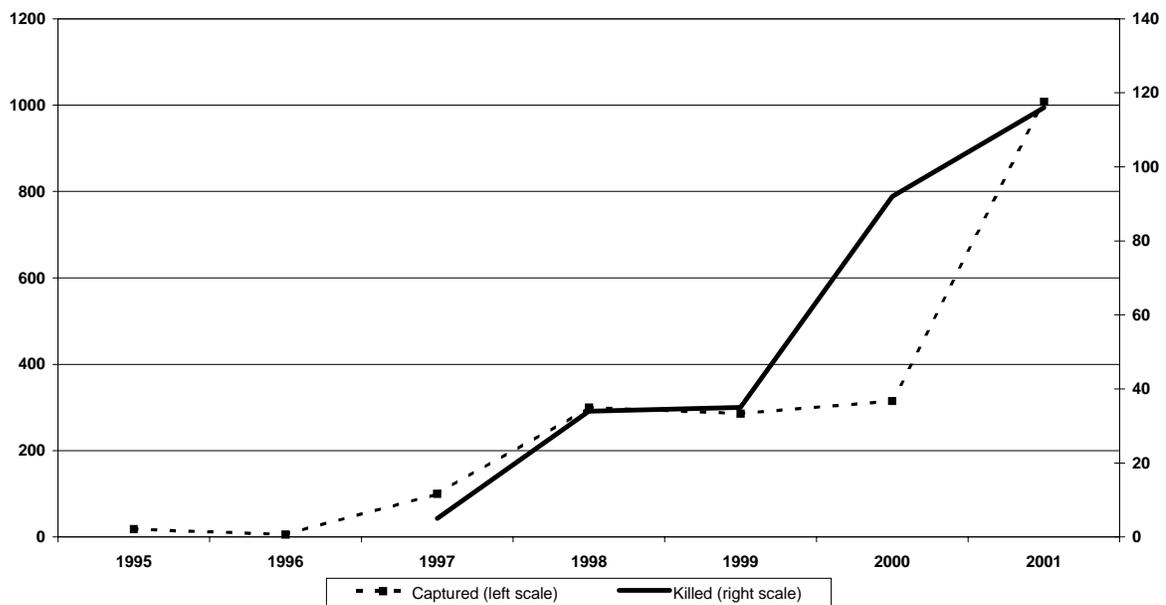
The government’s initial stance towards the AUC ranged from passive to encouraging. The government created self-defense groups in 1994 (later declared illegal) that fed guns and manpower to the paramilitaries, and both the government and the official military refrained from cracking down on the paramilitaries (Chernick 1998). Recently declassified US documents show that the State Department and the CIA saw the Colombian government as turning a blind eye toward and even supporting the paramilitaries in 1997-98 (National Security Archive 2002). At the same time that the paramilitaries grew more independent and active, the Colombian government’s human rights performance improved substantially as can be seen in the graph of human rights complaints against the police and military in Figure 4.

The paramilitaries thus replaced the government as the main aggressor against the guerillas and main human rights violators in the conflict (Nuñez 2001, pp. 9-11), a switch that has been called “the paramilitarization of the war in Colombia” (Chernick 1998) The atrocity delegation

model suggests that the Colombian political elite wanted American aid but knew it would come with human rights strings attached. The solution of permitting the rapid growth of the paramilitaries led to a loss of control over conduct of the war; and as the ferocity of the paramilitaries has unleashed, the costs of this move have become evident. But paramilitary atrocities have allowed for a simultaneous clean-up of the official military, paving the way for an increased flow of US aid.

Controversy swirls over whether the paramilitaries have indeed become independent. Although some links between the Colombian military and the AUC persist (Pardo 2000, p. 70, Sweig 2002, p. 130), the paramilitaries now operate substantially beyond the control of the official military. The best evidence is the effort the Colombian government devotes to anti-AUC operations. Figure 5, for example, shows that the government has been capturing and killing

Figure 5. Anti-Paramilitary government actions



Source: Ministry of Defence, 2002

substantial numbers of paramilitaries in recent years. The general prosecutor’s office has also brought hundred of charges against AUC members during this period (Ministry of Defence 2002). This extent of anti-AUC activity is hardly consistent with the AUC being government puppets.

Núñez (2001), Spencer (2001), El Tiempo (2002), and Deas (2002) also argue that the paramilitaries operate substantially outside of government control. The path of the government's anti-AUC activity, first growing under Samper and accelerating substantially under Pastrana, indicates increasing government unhappiness with the paramilitaries' violence and suggests that the paramilitaries' autonomy has led to the atrocity overshooting that the atrocity delegation model predicts (see the end of section 3). Most accounts of the Colombian conflict either dismiss current government efforts to crack down on the paramilitaries as a sham or deny any government collusion with the AUC. Our account grants credence to both positions by placing the main collusion at the earlier point in time at which the government gave the paramilitaries free rein. The later moves against the AUC are in fact a consequence of the earlier cooperation.

The Samper and Pastrana administrations eventually secured substantial US aid. Samper's relationship with the US was obstructed by his links to drug trafficking (Shifter 1999, p. 18), but he began the Colombian war on drugs in earnest and eventually secured aid in 1997 and 1998 (Center for International Policy, 2003). Samper also improved the human rights performance of the Colombian military, setting the stage for vastly greater US aid under Pastrana, his successor. Pastrana, not burdened with Samper's baggage, secured the "Plan Colombia" package in 1999 (Rabasa and Chalk 2001, ch. 6), at first limited to anti-drug operations but then extended in 2002 to allow for war operations, and making Colombia the third largest recipient of US aid.

The end result of paramilitary expansion has been the increase in violence predicted by the atrocity delegation model. The number of civilians killed by the government and paramilitaries combined rose from 218 in the decade 1988-97 to 2324 in the half-decade 1998-2002. The analogous figures for injuries are 97 and 479 – a smaller percentage increase, due to the fact that the paramilitaries rarely leave their victims alive (Restrepo, Spagat and Vargas 2003).³

³ These figures refer only to those "out of combat" casualties for which the government or the paramilitaries comprise the sole belligerent party; blame is too difficult to attribute for the "combat" casualties that

Partly because of pressure from human rights lobbies, American aid came with strings attached, and these illustrate the United States's culpability aversion. The aid package required that every officer in American-supported units be screened for a clean human rights record. Periodically, the US president must issue a certification or grant a waiver to allow continued disbursement of funds. The certification requires that the armed forces are severing its links, tacit or not, with the paramilitaries; that members of the Colombian armed forces "credibly alleged" of links to the paramilitaries or of human rights violations are suspended from service; that the Colombian armed forces are cooperating with civilian prosecutors in those cases in which its members have been accused of rights violations and that any violations in the previous period have not been so widespread as to merit termination of the program; and that the president is satisfied with official Colombian efforts to improve human rights performance (Amnesty International 2001 and Human Rights Watch, 2002). When Plan Colombia was extended in 2002, the US laid down further strictures to tie the flow of money to an improving human rights record. The US has continued to press the Colombian government to suppress the AUC and uses Plan Colombia as leverage to press this demand, despite the conviction of some military analysts that it is foolhardy to attack a force that is doing battle with the FARC (Marks 2002, p. 24). Some in the Colombian military have even favored rejection of Plan Colombia due to the military consequences of its human rights conditions (Marks 2002, p. 25). The US on the other hand is willing to sacrifice a quicker, more secure defeat of the rebels to attain a better human rights record.

(b) Atrocity delegation 2: The RUC vs. the IRA in Northern Ireland

The largely Protestant police force of Northern Ireland, the RUC (Royal Ulster Constabulary), is the domestic power and the IRA (Irish Republican Army) is its enemy. We

occur in battles between guerilla and anti-guerilla forces. The trend is so marked, however, that including combat casualties would not change the qualitative story. For details see Restrepo, Spagat and Vargas 2003.

ignore IRA splinter groups for now, but see case study (c). Some of the Protestants who wish to maintain ties to Britain, broadly known as “Loyalists” in Northern Ireland, have formed paramilitary units, chiefly the Ulster Volunteer Force (UVF), launched in 1966 in response to the Catholic civil rights movement in Northern Ireland, and the Ulster Defence Association (UDA), a 1971 fusion of vigilante groups. Both organizations were from the beginning violently anti-IRA and anti-Catholic, and conducted bombings, assassinations and sectarian murders (Bruce 1992, chs. 3 and 5). The RUC’s foreign patron is the British government.

In the period we consider, 1968 to the mid 1970’s, the RUC, British government and the Protestant or Loyalist paramilitaries all struggled to defeat the IRA, but the RUC was significantly more atrocity averse than the paramilitaries. The RUC, like some other police forces, has used excessive force but it does not, for example, bomb pubs as Protestant paramilitaries do. The British government is still more atrocity averse than the RUC, perhaps because the British electorate is not on the front lines of the conflict.

In the early years of the UDF and UDA, roughly 1968-1972, the RUC encouraged their development as a violent force beyond its control. As the paramilitaries grew, the RUC undertook reforms, becoming more evenhanded and less brutal in its policing, both to avoid being disbanded and to win greater British support; these benefits translate into the higher foreign aid levels of the atrocity delegation model. By 1974 the RUC was reasonably clean, ensuring its survival and indeed expansion. By this point the more violent paramilitary dimension of the struggle was in place. The UDF and the UDA did not, however, jeopardize British support for the RUC since by then they had become genuinely independent; suppressing them was no longer feasible or would have been costly and dangerous to execute. Were it not for the paramilitaries’ independence, the British could have insisted that the RUC shut them down as a quid pro quo for continued aid. But the RUC could have quashed or diminished the paramilitaries in their 1968-72 infancy had it been determined to do so.

The RUC attitude in 1968-69 was that the IRA was the enemy and that “self-defense” groups were useful for holding it in check. Dillon (1991) documents RUC members failing to prevent and even assisting Loyalist vigilantes in burning and looting Catholic homes and shops. Some RUC members were active in encouraging Loyalist atrocities while many others were too scared to intervene (Dillon 1991, p. 209). The RUC “invariably acted against the Catholic side in a riot situation, even when the riot was provoked by Protestant extremists” and indulged Protestant applications for firearms licenses (Darby 1976, pp. 58-60). Farrell (1976, ch. 11) shows that the RUC frequently provided cover for and even leadership in Loyalist violence. In 1971, under the “internment” policy of arresting and holding people merely on suspicion of being terrorists, the first RUC list of 342 suspects consisted solely of “republicans,” i.e., those supporting a united Ireland (Ryder 2000, p. 122).⁴ The RUC thus hardly suppressed the UVF and UDA during their big growth spurt – indeed Bruce (1992, p. 47) cites an RUC officer voicing approval for the formation of vigilante groups. This early support for the Protestant paramilitaries proved crucial to their organization and to potential recruits who might otherwise have been reluctant to step forward.

By 1972 Loyalist atrocities well exceeded what they would have been in the absence of independent paramilitaries. There had been a handful of Loyalist murders between 1968 and 1971, mostly the result of rioting. But beginning in 1972, with the UDA and UVF fully staffed and organized, the Loyalist murder rate topped 100 per annum and stayed at roughly this rate until 1977. The brutality of paramilitary tactics by 1972 scaled new heights, and included the torture and mutilation of many of their targets.

The violently anti-Catholic stance of the RUC put its very existence into doubt (Ryder 2000, p. 127-129). Using the stick of shutting the RUC down and the carrot of expansion, the

⁴ On the one-sidedness of internment see also Coogan (2000, p. 343) and Taylor (2001, p. 67).

British government worked to reshape the RUC into a more fair, less violent force. These punishments and rewards, which play the role of foreign aid in the atrocity delegation model, gave London the leverage to transform the RUC. The force was briefly disarmed at the end of 1969, bringing it into line with the UK norm, and then permitted to rearm with only light weaponry (Ryder 2000, pp. 119-123). To win over the Catholic community, a Catholic, Jamie Flanagan, was named chief constable. Flanagan spearheaded the RUC's struggle for survival by insisting on evenhanded policing; his great moment came during the Loyalist strike of 1974 when not a single RUC man joined the strikers. Shortly after this the British extinguished its threat to shut down the RUC, and went on to increase the size of the regular RUC force by 50% and double its reserves. Subsequent expansion led to a further doubling of the force. The British government's "foreign aid" was vital to the RUC, but support was predicated on the RUC acting like a police force, not as a participant in the battle of atrocities. The RUC embraced the reform initiatives (Ryder 2000, p. 140), but it had to give up its own paramilitary activities only after the UDA and UVF had, with RUC encouragement, already taken over these functions. The two separate tracks of the anti-IRA battle had previously been laid down: an officially sanctioned and relatively clean police component and a violent paramilitary campaign.

RUC reform progressed rapidly and by 1974 the paramilitaries had become largely independent. Various examples of collusion between the security apparatus and paramilitaries persisted – the RUC passing information on IRA movements to the paramilitaries, or the RUC not diligently following leads on Loyalist paramilitary activity (Coogan 2000, pp. 603-608). But given the size and complexity of the RUC, the persistence of some collusion is unremarkable and does not amount to evidence of the organization's chosen policies – indeed some collusion between rogue elements of the British security forces and the Loyalist paramilitaries lingered into the 1980's. Both Bruce (1992) and Ryder (2000) argue that ties and cooperation between the RUC and the paramilitaries have been minimal post 1974. These judgments are of course consistent

with evidence that the pre-reform RUC actively encouraged the development of the UVF and UDA during the start-up phase of 1968-72.

Just as in the Colombian case, once the paramilitaries were independent, the resulting overshoot in atrocities levels led the domestic power, the RUC, to try to reverse the tide. By 1974, the RUC was cracking down vigorously on the UDA and UVF (Ryder 2000, ch. 5), and amounts to further evidence that the paramilitaries were not under RUC control. Early highlights of the RUC campaign include the trial and conviction of 26 UVF members in 1976, the suppression of the UDA-backed strike of 1977, and the capture and conviction of the “Shankill Butchers.” The RUC even pursued British security forces when they employed illegal tactics in Northern Ireland (Dillon 1991, ch. 8 and Ryder 2000, pp. 203-206).

The atrocity delegation model suggests that the development of independent Protestant paramilitaries was useful to the Loyalist side of the conflict; it kept British support intact while allowing the fight against the IRA to remain unencumbered by the human rights restrictions that British support might have entailed. The end result is a dirtier conflict than would have obtained without the possibility of British support.

Partisan accounts of the conflict in Northern Ireland tend to take one of two extreme views. Either Protestant paramilitaries are mainly composed of off-duty police officers or the police in Northern Ireland have always been brave and honest upholders of law and order. Our interpretation allows a U-turn (overshooting) in atrocity levels that incorporates parts of both stories, with the RUC colluding with fledgling paramilitaries in their early history but then trying to suppress them after their atrocities had reached extreme levels.

(c) Atrocity pooling 1: Sinn Féin/IRA vs. the Ulster Unionists in Northern Ireland

The setting is again Northern Ireland but the time is now after the Good Friday power-sharing agreement of April 10, 1998 that brought the IRA and Sinn Féin, the political and legal

wing of the IRA, into local government. Although Sinn Féin/IRA rather than the RUC now plays the role of the domestic power, the British government is still the foreign patron. Paramilitary organizations include extremist elements within the IRA as well as various splinter groups; we take the Real IRA, founded in 1997 in opposition to the cease-fire then in place, as characteristic. Protestants, as represented by the Ulster Unionist Party, are the “enemy” or opposing force.

Sinn Féin has over the last decade shifted from a strategy of ejecting the British to one of striving for political power under continued British sovereignty (O’Brien 1997, pp. 121-167). The British aim to achieve a permanent peace settlement. But peace requires that a Sinn Féin/IRA turn from violence be rewarded with political power and hence the British government has supported, up to a point, the Sinn Féin goal of wresting power from the traditional Protestant power holders. The key points of contention have been the number of ministries that should go to Sinn Féin in a unity government, the circumstances under which Northern Ireland can merge with the Republic of Ireland, the extent of links between the governments of the north and south of the island, the procedures for the disarmament of paramilitaries on both sides and the nature of possible prisoner releases. Accordingly, we interpret π not as the probability of a military victory, but rather as a continuous gauge of Sinn Féin/IRA success in a peace settlement for Northern Ireland. All that is needed for the atrocity pooling model to be applicable is that success can be summarized by such a variable.

Given its longstanding ties to the Protestant community, the British government is markedly more averse to atrocities than the IRA and Sinn Féin. The Real IRA was formed specifically to commit acts of terror, given that the IRA was on cease-fire, and hence is less atrocity averse than the IRA.

Britain, in its role as foreign patron, in the model, provides aid to Sinn Féin. But this support takes the form of diplomatic backing rather than money; keeping the Protestants and Ulster Unionists engaged in the peace process and willing to make concessions requires steady British

pressure. That the foreign aid is diplomatic rather than financial has no bearing on the applicability of our model. What matters is that British support shifts the PPF outward, increasing the desirability to Sinn Féin of the peace settlement, for any given atrocity level.

Shortly after power sharing began, the Real IRA initiated a bombing campaign that culminated in the Omagh atrocity of August 1998 in which 29 people at a shopping mall were killed including a woman pregnant with twins and visiting Spanish schoolchildren (Coogan, 2000, p. 705). Every political actor in the conflict, including Sinn Féin leader Gerry Adams, expressed shock and outrage, and public opinion was implacably opposed to the Real IRA. And in subsequent elections Sinn Féin gained significant strength, in part due to its perceived separation from the Real IRA. On the other hand, Gerry Adams has always left open the possibility of an IRA return to violence, and IRA decommissioning of weapons so far has been limited – the IRA’s threat of violence always remains just below the surface (Lloyd 1998, p. 120). It is possible, therefore, that senior IRA personnel could have had information about the Omagh attack that might have prevented it had they shared the information with the RUC or British authorities. The victims of Omagh have in fact subpoenaed Gerry Adams and other top Sinn Féin leaders to testify in their civil lawsuit, hoping to generate such information about the event (Harding 2003). On the British side, prime minister Tony Blair opined in the immediate aftermath of Omagh that Gerry Adams would not have been involved in such a horrendous act (Baldwin et. al 1998). But at the same time, one of the main reasons why Britain suspended the power-sharing arrangement in Northern Ireland in 2002 were accusations that the IRA was using its access to government institutions to gather information that would be useful in future terrorist operations. Evidently, bona fide uncertainty exists over the Sinn Féin/IRA connection to violence in Northern Ireland (Coogan 2000, p. 726-30).

The uncertainty is apparent in the following excerpt from *The Economist* (2003):

Republicans appear to want to retain both the respectability they have won by

working democratically and the leverage they gain from the implied threat of further violence. As a British official laments, 'I don't know which is more worrying, the thought that maybe [Sinn Féin leaders] Adams and McGuinness can't do anything, or that they can, but they won't.'

The passage also underscores the advantage to Sinn Féin of the uncertainty. If Sinn Féin can raise Britain's subjective probability that the Real IRA is *not* under Sinn Féin or IRA control, it becomes more respectable and smooths relations with its foreign patron. If this can be accomplished while maintaining the leverage value of violence, its cause is served all the more effectively.

The atrocity pooling model suggests that Omagh bombing could have accomplished just this uncertainty-enhancing purpose. The Sinn Féin and IRA leadership had an interest in not preventing the Omagh bombing precisely because such an extreme event made it look like the IRA was unlikely to have been involved. The counterfactual is key. Had Omagh or a similar event not occurred, it would have been known henceforth that Sinn Féin and the IRA can bring violence to a halt when they want. Hence the Omagh incident has maintained uncertainty in the minds of the British and others about the extent of Sinn Féin control over atrocities – the incident may thus help shore up British diplomatic support when or if new rounds of terrorism become necessary.

(d) Atrocity Pooling 2: the Israeli-Palestinian conflict

The PLO (Palestinian Liberation Organization), which we treat as coterminous with the Palestinian Authority, is the domestic power, fighting its enemy Israel for more land and autonomy. Hamas and Islamic Jihad are the paramilitaries.

Under the auspices of the Oslo accord of 1993, Israel in stages transferred the Gaza strip and roughly half of the West Bank to Palestinian self-government. This process had ground to a halt by early 1999, after which the two sides had to confront several divisive issues, e.g., the final partition of the West Bank, sovereignty over Jerusalem, and the right of Palestinian refugees to return to Israel. The tactics employed in the ongoing conflict over these substantial differences

form the primary topic we consider. After making little progress on their own, the Clinton administration brought the two sides to formal negotiations at Camp David in July 2000, which failed to culminate in agreement. The Palestinian “second intifada,” which began with stone throwing at the Israeli military but progressed rapidly to shootings, a well-publicized mutilation of an Israeli soldier, and suicide bombings, was launched in September 2000. Negotiations continued at Taba in January 2001 but collapsed amid renewed terror and retaliation. The Bush administration declared its support for a “two-state solution” to the conflict in June 2002 and in June 2003 the parties again began to negotiate.

Several wealthy industrialized democracies, most importantly the United States, have served as the PLO’s foreign patron. While some of these powers provide money to Palestinian organizations, their primary importance lies in the political and diplomatic backing they offer the Palestinians. US support exhibits a marked ebb and flow – strong in 2000 and 2003, weaker in between – but the US is nevertheless the critical patron since it alone can significantly influence the Israelis, and so we refer henceforth to just the US as the foreign patron.⁵ US support has proved critical at times. The pressure it applied at the Camp David negotiations in 2000 and at Taba in 2001 helped induce the Israelis to accept a Palestinian state and then to make increasingly substantial land offers (Morris, 2002). More recently, the US has pressed the Israelis to dismantle unofficial settlements in disputed territory as a step towards a two-state solution to the conflict.

In translating the historical details into the language of our model, π should be interpreted (analogously to case study (c)) as the extent of Palestinian success, e.g., the fraction of land going to the Palestinians in an impending two-state outcome, not as a probability of success. Many other points divide the Israelis and the Palestinians, but they can plausibly be reduced to a one-

⁵ Labeling the US as the foreign patron requires only that US and Palestinian goals coincide in some respects, and is consistent with the vastly greater financial aid that the US grants Israeli and the fact that US and Israeli goals also partly coincide.

dimensional scale. The foreign aid variable should be interpreted as diplomatic rather than financial aid (also as in (c)); greater diplomatic support will expand the size of a future Palestinian state, all else being equal.

The US has strenuously protested Palestinian violence directed against Israeli. Yasser Arafat, the longstanding leader of the PLO, in contrast has explicitly supported killing Israeli soldiers on the West Bank and, although here his position is more ambiguous, may also favor atrocities directed against Israeli civilians. The US is thus markedly more atrocity and violence averse than the PLO and Arafat. Hamas and Islamic Jihad are least atrocity averse of all.

A prime component of the four-party set-up is that the domestic power, the PLO, prefers lower atrocity levels than its paramilitary allies, Hamas and Islamic Jihad. This could be due to the PLO having a greater intrinsic dislike of atrocities. Another possibility is that, when the atrocity level a is sufficiently large, further increases in a will decrease π (see, e.g., Telhami 2001, Karon 2001). A diversity of views about the exact point at which π is maximized can then explain the variety of preferred a 's (see section 3). Many senior PLO leaders, including Arafat, seem to believe they will achieve the biggest possible Palestinian state via negotiation (e.g., Shikaki 2002, p. 97). Hamas appears to oppose negotiations and may be following a strategy of creating a Palestinian state through military victory. In the Hamas view, even if suicide bombings undermine the PLO's negotiations with Israel, they will aid the expulsion of Israel from a larger territory. A third way to obtain the PLO preference for a smaller a is a difference in time horizons. The PLO leaders are older than most second intifada activists and want to see a Palestinian state sooner. The activists in contrast see themselves as engaged in a long-term war with Israel in which victory can be obtained only through a sustained show of force; any short-term loss of bargaining leverage is inconsequential (Shikaki 2002).⁶ These three alternatives are compatible with one another; any or

⁶ One terrorism expert, cited in (Fisher 2003), comments "When I interviewed over 100 Hamas activist and all leadership, I was quite astonished because everyone told me that an Islamic state would begin about the years 2022 or 2023."

all can underpin our ranking of preferred atrocity levels.

Can the PLO control the terrorist acts of Hamas and Islamic Jihad? A vast din of opinions have been voiced on this question. With regard to Yasser Arafat alone, some analysts believe he orchestrates suicide bombings (Luft 2002, pp. 2-3), others think he simply does little or nothing to stop them (Ross 2002, pp. 22-24), some believe that Arafat could not stop most terrorists even if he wanted to (Lewis 2002, p. 4), and still others argue that while Arafat could stop most terrorism he is not willing to pay the political price it would entail (Shikaki 2002, p. 104, Mishal and Sela 2000, chs. 3 & 4). This very diversity bolsters yet another common view, that there is real ambiguity on the matter (Wright 2002, Cordesman 2002, pp. 66, 193-95). Opinions conflict, and perhaps no one outside of the PLO can be sure about Arafat's control over suicide bombings and other acts of terror.⁷ A similar uncertainty applied to Mahmoud Abbas during his tenure as prime minister of the Palestinian Authority (April-September 2003). Some argued that Abbas only needed to take the decision to unleash force against the militants (e.g., Safire 2003), while others maintained that in the absence of substantial Israeli concessions Abbas would not be able to rein in Palestinian violence (e.g., Freedland 2003).

The Palestinian-Israeli conflict thus fits both the four-party set-up and the atrocity pooling model's assumptions on preferences and information. Genuine uncertainty persists about whether Hamas and Islamic Jihad are subject to PLO control. The US is more atrocity averse than any of the Palestinian actors. The PLO also appears to prefer fewer terrorist atrocities than the Palestinian organizations that openly advocate violence, although the mystery surrounding Arafat obscures the issue. The US displays the preferences of culpability aversion: it wants a more pro-Palestinian settlement and *ceteris paribus* will use its diplomatic power to promote that goal, but as the likelihood rises that the PLO is backing terrorism, the desire to promote the Palestinian cause

⁷ See the lively exchange of views on the Israeli-Palestinian conflict in *The New York Review of Books* (April 25, May 9, June 13, June 27 and July 18, 2002) in which well-informed authors disagreed sharply on Arafat's culpability for recent terrorism.

diminishes accordingly. Consistently with culpability aversion, those who advocate continued US engagement with the PLO typically argue that it cannot stop Palestinian terrorism, implying that the US is not culpable for Palestinian violence. Insofar as Hamas in 2003 is seen to be beyond PLO control (low q), the condition that the US strongly desires victory when inculpable is likely to be satisfied.

But is it plausible that the PLO is pooling – permitting anti-Israeli violence that it does not directly prefer solely to maintain the foreign power’s uncertainty about whether the PLO can control the flow of terrorism? In a pooling equilibrium, one of two things must be happening. Either the PLO cannot control Palestinian atrocities or it can control them but chooses to allow enough atrocities to occur to make it plausible that it actually has no control. PLO leaders are subject to intense pressure to bring the suicide bombings to an end. But even if they could, it might still be against their interests to do so; they would reveal the capacity to rein in the terror and so would henceforth be unable to claim that the violence is beyond their sway. In fact, terrorist incidents have often been interpreted as challenges to Arafat’s, and later Abbas’s, authority and ability to negotiate for the Palestinians (Saletan 1999, Erlanger 2002, Daily Star 2002, Safire 2003). It was common in 1999 for even Israeli government officials to argue that terrorism is costly to Arafat and mainstream Palestinians and that neither supported it (Saletan 1999, Hockstader 1999a, Hockstader 1999b). Later, during the second intifada, analysts have sometimes interpreted particularly gruesome suicide attacks as proving that Arafat cannot control the terror. For example, “if last week’s bombings prove anything, it is that the chairman of the Palestinian authority has lost control of the Palestinian polity” (New Republic 2002, see also Karon 2002). But, in the pooling equilibrium, it is precisely these costs that make it plausible to the foreign patron that the Arafat or the PLO cannot control the extremists, allowing him to maintain his support and thus achieve a net utility gain. Less terrorism on the other hand although it might *ceteris paribus* be the PLO’s preferable option could raise suspicions that terrorism is subject to

PLO control, and thus jeopardize the organization's international support.

5. Conclusion

As the atrocity pooling model and case studies illustrate, parties to a military conflict can sometimes gain by setting their level of violence to spread misinformation. We have so far emphasized the domestic power as the strategic and deceiving party, but even within the basic four-party set-up other possibilities arise. If the paramilitaries are patient enough to prefer an eventual increase of foreign aid over the immediate but temporary cost of diminished atrocities and a smaller probability of victory, then they too may benefit from enhancing a foreign patron's uncertainty. By reducing atrocities to the level the domestic power prefers, the paramilitaries can lead the foreign patron to assign a higher probability to the event that the domestic power can control the paramilitaries; given these beliefs, the foreign patron may then prefer to grant aid to the domestic power. Once the aid is secured, the paramilitaries – in the event they are in fact beyond the control of the domestic power – will hike up atrocities to the point they most prefer. This ruse will be in the paramilitaries' interest if the expansion of the PPF enabled by foreign aid more than makes up for the short-term reduction in the probability of victory. In this case the possibility of foreign aid might restrain atrocities.

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