STRATHCLYDE

DISCUSSION PAPERS IN ECONOMICS

RATIONALISING 'IRRATIONAL' SUPPORT FOR POLITICAL VIOLENCE

BY

COLIN JENNINGS

No. 12-12

DEPARTMENT OF ECONOMICS
UNIVERSITY OF STRATHCLYDE
GLASGOW

Rationalising 'Irrational' Support for Political Violence

Colin Jennings*
University of Strathclyde

Abstract

This paper provides a rationale for group support for political violence when violence does not provide a material benefit. A theory of fairness is adopted to demonstrate that although group violence may not be the equilibrium of a material game it may be a fairness equilibrium in a game containing psychological payoffs. For this to happen the material stakes must be perceived as low and psychological payoffs are expressive. Although the material stakes are actually high, members of each group may choose expressively to support the use of violence because the probability of being decisive is low. The paper also considers the possibility of peace emerging as a fairness equilibrium. This can only happen if each group perceives the other as making some sacrifice in choosing peace.

KEY WORDS
conflict; emotions; reciprocity; expressive

JEL Classification
D03; D72; D74

1 Introduction

Fearon (2006) provides a survey of work on ethnic mobilisation and ethnic violence. Within that survey he discusses explanations for ethnic violence. Violent conflict (whether ethnic or not) is a puzzle from a rationalist perspective as conflict is inefficient. In reviewing possible explanations he draws attention to the idea that inter-ethnic violence is strongly related to intra-ethnic politics and that 'violence is a tool by which political elites maintain or increase their political support', but that the 'central theoretical puzzle for such 'diversionary' arguments is why publics would increase their support for a leader who takes actions, such as provoking ethnic violence, that by hypothesis makes them worse off'. (p. 863). This paper will attempt to address this theoretical puzzle.

Rationalist explanations for conflict in models that treat groups as unitary actors can be divided into the three main explanations reviewed by Fearon (1995); bargaining failures due to private information (for example in Cetinyan (2002)); commitment problems (for example in Fearon (2004)) and issue indivisibilities (as, for example, implied by Bernholz (2004)) on terrorism and supreme values). Models that allow for intra-group heterogeneity and thus intra-group competition provide a richer environment for exploring group conflict and in particular the competition between doves that are essentially unwilling to use violence to pursue their goals and hawks who are willing to use violence to pursue their goals. In the next section we will review the rationalist literature on support for violence which may make sense from a material perspective (in the absence of commitment to an efficient outcome), but the crux of Fearon's puzzle is the support for violence where it does not provide an obvious material benefit, in fact, the violence leads to a predictable material loss. Problems of commitment and indivisibilities still play a background role in this paper.[1] The key difference in the setting depicted here, is that they are not sufficient to explain the existence of group conflict, as group conflict is not depicted as the equilibrium of a material game. Rather group conflict emerges when emotions are added to the analysis.

Rationalist explanations arguably suffer from downplaying the role of emotions when emotions clearly seem to play a central role in group conflict.[2] Fearon and Laitin (2000) observe that anger seems to play a clear role in

---

[1] Powell (2006) argues that indivisibilities can be subsumed under commitment problems.

[2] Horowitz (1985) famously wrote that 'A bloody phenomenon cannot be explained by a bloodless theory'. (p. 140).

group conflict, and such that it often seems to be the case that launching an attack against a strong opponent provokes a predictably harsh response which in turn generates in-group anger and support for violence. We might extend this observation and argue that the same sort of mechanism is in play within the strong group, namely that if launching a harsh response is likely to prolong the terrorism and violence emanating from the weak group surely then emotions must be playing a part in the support for the harsh response. Sambanis (2004) provides a critique of empirical tests of economic models of civil war such as Fearon and Laitin (2003) and Collier and Hoeffler (2004). As part of his call for greater use of case studies is the idea that case studies do better at identifying micro-level details such as emotional response. Sambanis argues that emotional and economic theories can be combined with 'emotion-based explanations as focusing on the demand side of the equation and economic models as focusing on the supply side. As we develop more of the demand side, it becomes obvious that ideology and psychology cannot be ignored as explanations of civil war.' (p. 268). This paper is an effort in that direction; an attempt to set-up an emotionally based model of the demand for violence but one that can be incorporated within a rational choice framework.[3]

This paper explores a setting where one group is weak relative to a strong group. This can be viewed as a relatively strong incumbent being opposed by a relatively weak group where both groups contain peace-seeking doves and hawks willing to use violence. In a choice between passivity and aggression the strong group is depicted as having a dominant strategy to be aggressive in response to whatever action the weak group takes. If the weak group is aggressive, at a relatively small cost the strong group is better off fighting than conceding and if the weak group is passive for a small cost of aggression the strong group is better off claiming all of the issue under dispute than striking a bargain with the weak group. In response to aggression by the strong group the weak group should in its material interest concede since fighting will only bring costly defeat for no gain over the issue.

Emotions are incorporated by turning to behavioural economics and Ra-

---

[3]Laitin (1995) calls into question macro level explanations for political violence, given that macro conditions were similar in Catalonia and Basque Country and Ukraine and Georgia. He argues that political violence became a feature of political interaction in Basque Country and Georgia, but not in Catalonia and Ukraine because of differences in micro level factors. Demand for violence is implicit in his focus on 'social organization'. The analysis presented here will place emotionally driven demand for violence as a central micro explanation for the existence of political violence and if such a demand is lacking, political violence will not exist or cannot be sustained.

bin's (1993) theory of fairness and exploring why the weak group might actually choose aggression in response to aggression. Rabin's theory tells us that so long as the stakes are not so high, we can expect to see reciprocal behaviour such that harmful actions are met with harmful actions and helpful actions are met with helpful actions. A key challenge, however, for the application studied here is to explain why we should ever expect the stakes to be low when group conflict is clearly a high stakes game? We point to the crucial role of mass collective action. As groups become larger, individual decisiveness in determining the group action falls such that the instrumental stakes fall. This means that the indirect material costs of engaging in conflict may be discounted, but the direct expressive benefits of reciprocation may be exaggerated compared to their actual importance for *ex post* welfare. As a result, weak group members may choose aggression as an angry expressive response to aggression by the strong group, even though if they were decisive they would not have made such a choice. If a sufficient number of members choose aggression so that it satisfies a hawk's desire for ego rents (which could be viewed as positively related to the number of supporters) and that doves are unable to prevent the hawks from acting then the group will engage in aggression.

Fearon's central puzzle focuses on members of a weak group supporting violence that makes them worse-off. This paper pays close attention to that idea, but extends the question to ask why the strong group may not be inclined to reward seemingly helpful behaviour by the weak group and thus provide for the Pareto superior outcome of mutual peace compared to mutual aggression. We argue that it is important for members of the strong group to actually believe that if the weak group chooses passivity that this choice is not simply in their material interests in any case. If they believe that the weak group is making sacrifices in the pursuit of peace then peace may be possible.

2   Related Literature

The key feature of this paper is that members of the competing groups may support violent attacks on the other group, even though the violent attack provokes a harsh response that makes group members materially worse-off. The group approval provides an incentive for hawks to commit violence even when there is no great likelihood that the violence will succeed. The paradox, as stated, is why the in-group public incentivise hawks (by providing support) to use violence in situations where it makes them worse-off. The

4

phenomenon of insurgent violence, met by incumbent crackdowns, followed by support from members of both groups for the use of violence would seem to be widespread. Fearon and Laitin (2000) in their unconventional review of a number of books exploring ethnic conflict find considerable evidence of the use of violence to construct antagonistic ethnic identities which generates more violence and material loss. Tessler and Robbins (2007) stress the importance of public support for terrorists and explore Arab support for attacks against the United States. Jaegar et al (2012) study the phenomenon of support for violence in Palestine. They find that Palestinians that spent their formative years (ages 14-17) during the first Palestinian uprising hold significantly more radical positions than would be normally predicted, whereas individuals who spent their formative years during the Oslo peace negotiations are more moderate than would be predicted. This suggests empirical evidence for the violence breeding violence thesis. Krueger and Maleckova (2009) and Maleckova and Stanisic (2011) examine the effect of public opinion on terrorism and find that terrorism is positively related with unfavourable views of the target country. If this were not the case, the supply of terrorism would seem to be unrelated to support for it, so public opinion appears to be a key motivator for violence. The importance of public opinion is also given prominence in Berman, Shapiro and Felter (2011), where they find in the context of Iraq that improved service provision (the opposite approach to a crackdown) reduces insurgent violence because the public are more likely to share information with the government.

For the paradox to make sense there must be some alternative potential set of dove leaders who would not use violence as a strategy. This points us towards models of intra-group competition between doves and hawks. Examples are Kydd and Walter (2002) who argue that the reason we see the use of violence by extremists is to undermine trust between moderate negotiators and the government. The government may be forced to conclude that the moderates do not control their group and thus need to use violent crackdowns to protect themselves. Hamlin and Jennings (2007) and Jennings (2011) argue that the selection of hawks and the use of violence makes sense when the anticipated cost of conflict is relatively low. In this case it is worth incurring conflict costs because the hawks will produce a better bargain than a dovish and peaceful approach. Whilst recognising intra-group competition between doves and hawks the problem with approaches such as these is that they do not tackle why publics increase their support for hawks in response to crackdowns where it makes the publics materially worse-off. Either the issue of public support is not addressed, or where it is addressed support is offered because the public calculate they are materially better-off

supporting hawks.

There have been a number of papers where the use of violence to mobilise support plays a central role. In de Figueiredo and Weingast (2001), suppression by an in-group moves the preferences of moderates within an out-group closer to radicals within the out-group. This provides a motive for terrorism; the ultimate bargain may be closer to radical preferences. In Rosendorff and Sandler (2004) the mobilisation of support is linked to heavy-handed approaches by government. While both these papers recognise the phenomenon they both assume that violence met with violence generates support for the perpetrators of violence and they do not analyse why this would be the case. Other papers have attempted to endogenise the decision. In Ginkel and Smith (1999), dissident violence signals to the public that they represent that the incumbent is fragile and as a result the public may offer their support. This may succeed such as in the Velvet Revolution in Czechoslovakia in 1989, or it may fail as in Tiananmen Square in the same year. In the case of failure this looks like a potential answer to the paradox, the motivation for support for violence or rebellion is that supporters wrongly calculated that the rebellion would succeed. Siqueira and Sandler (2006) model competition between government and terrorists for supporters. The dilemma facing the government is that while a harsh crackdown reduces the probability of success for terrorists and thus also its attractiveness to potential supporters, shifting resources out of public spending reduces the opportunity cost of supporting terror. Significantly, Siqueira and Sandler also include an exogenous parameter for underlying support for terrorism. Bueno de Mesquita (2005) models terrorist recruitment and Bueno de Mesquita and Dickson (2007) model the competition between doves and hawks within a group rebelling against the government. Similarly to Siqueira and Sandler, these papers argue that a crackdown in response to violence can increase or reduce mobilisation, based on the balance of increased security which reduces support against ideological fomentation and reduced economic opportunity which increases support.

These papers provide an answer as to why public support might follow crackdowns; economic opportunity and ideology may outweigh the effect of a reduced probability of winning. However, this is an instrumental explanation for political support and thus does not address the paradox of support for violence which by hypothesis makes the supporters worse-off. It appears that there are a significant number of cases where the material calculation should really point towards the support for peaceful negotiation but yet the support is for those that perpetrate violence. In the last three papers discussed, ideology is an argument in the utility function and in the Bueno

6

de Mesquita (2005) case, it is assumed to be increasing with the severity of the crackdown. This is a non-economic, emotional dimension and the endogenisation of emotional payoffs and their trade-off with material payoffs provides the focus for this paper.

That emotions such as anger exist in conflict is well-documented. Gordon and Arian (2001) find that the stronger the threat, the more belligerent the policy choice. They argue that when one feels threatened the decision-making process with regard to policy is dominated by emotions rather than logic. Halperin (2008) finds that group-based hatred helps to interpret events and direct behaviour in a way that contributes to the continuation of the conflict. Maoz and McAuley (2008) look at the demand for aggressive policies by a strong group in response to a weak group. They find support for both perception of threat and dehumanisation as determinants of demand. The latter factor is clearly very worrying as it implies hatred as a determinant of policy. Halperin and Bar-Tal (2011) analyse emotional factors that hinder the processing of proposals that could contribute to conflict resolution.

A crucial component of the analysis presented here is that emotional decision-making in circumstances of conflict may be expressive. This refers to the idea that since individual decisions are unlikely to be decisive in determining outcomes, instrumental decision-making which focuses on the indirect benefit of choosing X in order to achieve Y may give way to expressive benefits which focuses on the utility directly gained from making the decision to choose X and this is disconnected from eventual outcomes. This generates two key insights. First, it helps explain collective action where instrumental logic would suggest free-riding. Second, expressive choice, given that it is 'inconsequential', may differ from the choice that would be predicted to be made instrumentally. Normatively, this may be good or bad depending on the context. In this paper, both Pareto superior and inferior outcomes emerging from expressive choice relative to the outcome that would be predicted instrumentally will be considered. A key challenge for theories of expressive choice is to provide a solid theoretical foundation. This paper attempts to do this by identifying choices that differ from the standard approach by using the behavioural approach found in Rabin's theory of fairness and the focus on psychological payoffs as a trade-off with standard material payoffs. With the behavioural distinction established, expressiveness operates so as to amplify the importance of psychological payoffs in decision-making. The literature on expressive choice spans several decades and is both theoretically and empirically rich. Although the idea was not new, its significance for democratic decision-making reached a wide audience

with the publication of Brennan and Lomasky (1994). Hillman (2010) links expressive choice to an individual's sense of identity. A sense of identity and group belonging clearly seems relevant in the context of group conflict. Hillman describes socially inferior outcomes caused by expressive choice as 'expressive policy traps'. We will see the possibility of such an expressive trap as the main focus of the analysis presented here, but we will also see that expressive choice can create the possibility for peace that would not otherwise exist.. For a broad overview of work on expressive choice which also considers it in settings more broad than formal elections, see Hamlin and Jennings (2011).

3   The Model

We begin by depicting the general form of the normal-form game played between a weak and a strong group. Players can choose to be aggressive or passive and the payoffs are as follows where we start by considering a two-player setting

<div align="center">

Strong Group

		agg	pass
	agg	$-c_{aw}, (R - c_{as})$	$(R - c_{dw}), 0$
Weak Group			
	pass	$0, (R - c_{ds})$	$\overline{\alpha} R, (1 - \overline{\alpha}) R$

Figure 1

</div>

We assume there is an issue or space that can be divided between the two groups such that the allocation to each group sums to R. When one group is passive and the other aggressive, the passive group receives 0 and the aggressive group receives R. When there is mutual aggression the stronger group wins and receives R while the weak group receives 0.[4] c_{dw} and c_{ds} are aggression costs for the weak and strong groups when confronted by passive opponents. These costs reflect the idea that in order to repress the other group some threshold level of military and other resources required for governance needs to be invested in. The opportunity cost of this investment

---

[4]This is obviously a strong assumption. One might argue that fights that appear one-sided today may in the future lead to concessions and achieve their purpose. This observation does not undermine the approach taken here. By showing that a weak group may engage in conflict with a strong opponent when defeat is guaranteed then clearly the result is even more likely to hold if the weak group were likely to secure some concessions through conflict.

is higher for the weak group than the strong group so that $c_{ds} < c_{dw}$. The costs of aggression for the weak group and strong groups when there is mutual aggression are c_{aw} and c_{as}. We assume that and $c_{dw} < c_{aw}$ and $c_{ds} < c_{as}$. This reflects the idea that costs of aggression are higher when met by aggression from the other side compared to passivity. If both groups are passive, aggression costs are removed and there will be a distribution of the issue or territory such that $0 < \overline{\alpha} < 1$, $\overline{\alpha}$ is assumed indivisible so that if there is to be a peace deal regarding the distribution of R, then this is the only one available. The focus of the paper is not on bargaining and how commitment can be made to any bargain that is struck. The paper assumes indivisibilities and commitment problems and depicts a game where the existence of these problems is not sufficient to explain mutual aggression. Rather they need to be combined with emotionality.

We assume that the ranking of the material payoffs for each player (where the best payoff is ranked 1 and the lowest payoff is ranked 4) is as follows

		Strong Group	
		agg	pass
	agg	4, 3	1 or 2, 4
Weak Group			
	pass	3,1	1 or 2, 2

Figure 2

The payoffs for the strong group are assumed to be unambiguous. The best outcome for the strong group would be (pass, agg). This means that they concede nothing and since the weak group does not resist the costs of aggression are low. The next best is (pass, pass). We wish only to study games where aggression is a dominant material strategy for the strong group. Therefore, $\overline{\alpha} > c_{ds}$ is an assumption, but one that is justifiable where bargaining outcomes cannot be smoothed so that it is not possible for the value of $\overline{\alpha}$ to be continuous from 0 to 1. Finally, we assume that mutual conflict with victory (agg, agg) is preferred to the avoidance of conflict but making full concessions to the weak group.

For the weak group the worst outcome is (agg, agg). They will lose the conflict because they are weak and thus gain no concessions despite incurring aggression costs. The second worst outcome is assumed to be (pass, agg) because they receive no concessions although they do not incur aggression costs. We will analyse two different permutations of payoffs based on the following possibilities. If the weak group is very weak or $\overline{\alpha}$ is relatively large (pass, pass) may be preferable to (agg, pass) as the costs of aggression (even

9

though the aggression is not reciprocated) may be too high to make it worth pursuing full concessions. We will analyse two types of game. The first will consider the case where passivity is a dominant material strategy for the weak group and the second where it is not. Note though that purely in terms of material payoffs, regardless of the ranking of $(R - c_{dw})$ compared to $\overline{\alpha}R$ there is only one pure strategy Nash equilibrium (pass, agg).

We will now incorporate the idea of Rabin's fairness equilibria and discover that depending on the material stakes and whether $(R - c_{dw})$ is greater or less than $\overline{\alpha}R$, the Nash equilibrium may be overturned and replaced with fairness equilibria which imply either mutual aggression or mutual passivity. Material stakes will become smaller as the membership of the two groups increase because the probability of being decisive becomes smaller. This requires expressive benefits which are unrelated to decisiveness. A key part of the analysis is identifying the nature of these expressive benefits.

3.1   Fairness Equilibria

With the game set up, we need to recap on the key ingredients of Rabin's theory of fairness in games before applying it to the subject of this paper - group conflict.[5] From the material game, a psychological game is derived which will determine each player's psychological utility. This will depend on three factors. The weak group's strategy a_w depends on their belief about the strategy of the strong group b_s and their belief about the strong group's belief regarding their strategy c_w. A similar description applies to the strong player. We focus only on pure strategies, so all strategies and beliefs about strategies are included in the set $\{agg, pass\}$.

We derive a kindness function for the weak player 1, $f_w(a_w, b_s)$ and the weak player's perception of the strong player's kindness $\widetilde{f}_s(b_s, c_w)$. These are expressed as follows

$$f_w(a_w, b_s) = \frac{\pi_s(a_w, b_s) - \pi_s^{fair}(b_s)}{\pi_s^{\max}(b_s) - \pi_s^{\min}(b_s)} \tag{1}$$

and

$$\widetilde{f}_s(b_s, c_w) = \frac{\pi_w(c_w, b_s) - \pi_w^{fair}(c_w)}{\pi_w^{\max}(c_w) - \pi_1^{\min}(c_w)} \tag{2}$$

$\pi_s(a_w, b_s)$ is the payoff received by the strong player given that they choose strategy b_s and the weak player chooses strategy a_w. $\pi_s^{fair}(b_s)$ is defined as $\frac{[\pi_s^h(b_s) + \pi_s^l(b_s)]}{2}$ and refers to the mid-point between the highest and lowest (Pareto efficient) payoffs the weak player could give to the strong player given that the strong player plays strategy b_s. If the numerator is positive the weak player is being kind to the strong player. If it is negative the weak player is being unkind and if it is zero the weak player's behaviour is neutral in terms of kindness. The function f_w is weighted by the maximum payoff the weak player could give the strong player minus the lowest possible payoff (now including possibly Pareto inefficient payoffs) that the weak player could give the strong player given their choice of b_s. A Pareto inefficient payoff obviously means playing a strategy that will make both parties worse-off compared to an alternative available strategy open to the weak player. The function $\widetilde{f_s}$ is analogous to f_w and measures the weak player's perception of the strong player's kindness towards him given their belief that the strong player believes they are playing strategy c_w. Analogous functions f_s and $\widetilde{f_w}$ are derived in the same way for the strong player. It will become clear below how these payoffs are depicted for the game we are analysing.

The following utility function for the weak player is assumed which incorporates material and psychological payoffs

$$U_w(a_w, b_s, c_w) = \pi_w(a_w, b_s) + \widetilde{f_s}(b_s, c_w)[1 + f_w(a_w, b_s)] \qquad (3)$$

and similarly for $U_s(a_s, b_w, c_s)$.

π_w refers to the material payoff and $\widetilde{f_s}[1 + f_w]$ refers to the psychological payoff. We can see from the psychological payoff that if the weak player believes that the strong player is unkind $\left(\widetilde{f_s} < 0\right)$ then the psychological payoff would be maximised by choosing to be unkind towards the strong player ($f_w < 0$). The reverse is true if the strong player is perceived as being kind and if the strong player is perceived as being neutral $\left(\widetilde{f_s} = 0\right)$ then the psychological payoff is irrelevant. Note though that the possibility of the psychological payoff altering behaviour is dependent upon the material payoff being relatively small. A contribution of this paper is to demonstrate how a high stakes material game such as violent conflict can be converted into a game in which these stakes are reduced and psychological payoffs can change behaviour.

Finally, the pair of strategies $(a_w, a_s) \in (agg, pass)$ is a fairness equilibrium if for $i = w, s$

(1) $a_w \in \arg\max_{a_w \in S_w} U(a, b_s, c_w)$
(2) $c_w = b_w = a_w$

3.2 Analysis of the Game

Recall that in an environment where only material payoffs count for utility, regardless of whether $(R - c_{dw})$ is greater or less than $\overline{\alpha}R$ there is a unique pure strategy Nash equilibrium (pass, agg). Aggression is a dominant strategy for the strong group and the best response for the weak group is to choose passivity. We will demonstrate for small enough probability of being decisive, in the case where $\overline{\alpha}R > (R - c_{dw})$, (agg, agg) is a unique fairness equilibrium. In the case where $\overline{\alpha}R < (R - c_{dw})$ for small enough probability of being decisive there are two fairness equilibria, (agg, agg) and (pass, pass).

3.2.1 Case 1: $\overline{\alpha}R > (R - c_{dw})$

We demonstrate the condition under which (agg, agg) would be the unique fairness equilibrium. We first consider a two player game which provides a useful benchmark as each player is clearly decisive with regard to which action is selected. We will then extend the analysis to n players in the two groups simultaneously choosing their preferred action under the assumption that they determine the outcome with probability $\pi_{dw} = \pi_{ds}$.[6] It is assumed that the payoffs for each player in the n player case is the same as for the players in the 2-player case. In the n player setting we will depict the supply of violence as dependent upon the demand for violence in the most simple manner. Some threshold level of support will be required for violence to be selected as the group action. If acts of violence are perpetrated, but there is insufficient support within the group then violence cannot be sustained. The purveyors of violence can be viewed as being motivated by ego rents, where the ego rent is increasing in the number of supporters they attract. This payoff is separate to any payoff that may be associated with winning the conflict and thus would explain why violence may be supplied by a group in a situation where the violence has no realistic probability of success.

One member in each group We begin by deriving $\widetilde{f_s}$. If the weak group member believes that the strong group believes they are choosing aggression and the strong group chooses aggression in response, they are being unkind

---

[6]Note that π_{dw} and π_{ds} are treated as exogenous. It could be argued that they should be endogenous as they are determined by the strategies of all the group members, but conducting such an analysis would be a major distraction from the core message of the paper. The reality of collective action is that as group size increases, the probability of being decisive decreases. This is what is depicted here.

to the weak group as shown by

$$\widetilde{f}_s = \frac{-c_{aw} - \frac{1}{2}\left(R - c_{dw} - c_{aw}\right)}{\left(R - c_{dw}\right) + c_{aw}} = -\frac{1}{2} \tag{4}$$

If the weak group chooses aggression when they believe that the strong group chooses aggression then

$$f_w = \frac{\left(R - c_{as}\right) - \left(R - c_{ds}\right)}{\left(R - c_{ds}\right) - \left(R - c_{as}\right)} = -1 \tag{5}$$

If the weak group deviates and chooses passivity when they believe that the strong group chooses aggression then

$$f_w = \frac{\left(R - c_{ds}\right) - \left(R - c_{ds}\right)}{\left(R - c_{ds}\right) - \left(R - c_{as}\right)} = 0 \tag{6}$$

Note that there is only one Pareto efficient choice in response to the choice of aggression by the strong group – namely to choose passivity.

The weak group will choose aggression rather than passivity in response to aggression by the strong group if

$$-c_{aw} - \frac{1}{2}\left[1 - 1\right] > 0 - \frac{1}{2}\left[1 - 0\right] \tag{7}$$

which reduces to

$$\frac{1}{2c_{aw}} > 1 \tag{8}$$

It is straightforward to check that the strong group would choose aggression in response to weak group aggression. As part of their utility function, $\widetilde{f}_w = -1$. So the strong group will choose aggression because $(R - c_{as}) - 1\left[1 - \frac{1}{2}\right] > 0 - 1\left[1 + \frac{1}{2}\right]$. It is both materially and psychologically preferable for the strong group to choose aggression. It is also straightforward to see that (pass, pass) cannot be a fairness equilibrium. The crucial point is that in this case $\widetilde{f}_w = 0$. If the strong group chooses passivity, it is in the material interest of the weak group to also choose passively so there is no act of kindness associated with the choice. Since there is no kindness displayed there is no incentive for reciprocity and only material payoffs count for the strong group and as a result they will choose aggression in response to passivity chosen by the weak group.

In this setting, the addition of psychological payoffs would not alter the equilibrium of the game. Given that c_{aw} is to be viewed as a very large number (8) will not hold. Psychological payoffs are swamped by material payoffs and the equilibrium will be (pass, agg).

n **members in each group** The analysis is now extended to allow for large groups. It is assumed that when each individual j in each group makes a decision their choice of action makes that group action more likely with a probability of π_{dw} and π_{ds}. In the following analysis π_{aw} and π_{as} are the probabilities that the groups choose aggression regardless of the choice of individual j and π_{pw} and π_{ps} are the probabilities that the groups choose passivity regardless of the choice of individual j. Obviously $\pi_a + \pi_p + \pi_d = 1$ for both groups. To capture the role of expressive payoffs a weight θ is introduced where $0 \leq \theta \leq 1$. This is distributed across members of each group. A weak group member j will choose aggression rather than passivity in response to aggression by the strong group if

$$\{\overbrace{-\pi_{aw}c_{aw} + \pi_{pw}0 - \pi_{dw}c_{aw}}^{\text{material payoffs}}\}\left\{\overbrace{+\pi_{aw}0 + \pi_{dw}0 - \pi_{pw}\frac{1}{2}\left(1 - \theta_{jw}\right) + \pi_{pw}0\theta_{jw}}^{\text{psychological payoffs}}\right\} >$$

$$\{\overbrace{-\pi_{aw}c_{aw} + \pi_{pw}0 - \pi_{dw}0}^{\text{material payoffs}}\}\left\{\overbrace{+\pi_{aw}0\left(1 - \theta_{jw}\right) - \pi_{aw}\frac{1}{2}\theta_{jw} - \pi_{dw}\frac{1}{2} - \pi_{pw}\frac{1}{2}}^{\text{psychological payoffs}}\right\} \tag{9}$$

which reduces to

$$\theta_{jw} > \frac{\pi_{dw}\left(2c_{aw} - 1\right)}{1 - \pi_{dw}} \tag{10}$$

If $\theta_{jw} = 0$ an individual fully absorbs the psychological payoff that comes from the group decision. So, for example, if the weak group chooses passivity in response to aggression by the strong group, even though the individual chooses aggression he will experience a psychological payoff of $-1/2$. If $\theta_{jw} = 1$ regardless of the group choice, the individual will receive a psychological payoff related to his own choice. So if the group choose passivity in response to strong group aggression, but the individual chooses aggression his psychological payoff will equal zero. This is an expressive payoff. The choice of an action brings a direct expressive payoff and if $\theta_j = 1$ the choice is fully expressive. The action brings a direct psychological payoff which is unrelated to the actual outcome of the game. Essentially, in the example discussed above the individual when choosing aggression but not causing aggression still receives a higher psychological payoff for his reciprocal choice.

For any $\theta_{jw} > 0$ there is an expressive component to the individual's choice, and from (9) we see that in the limit where $\theta_{jw} = 1$ aggression will be selected by an individual if $\frac{1}{2c_{aw}} > \pi_{dw}$. Earlier we stated that in a 2-player game we would not expect (8) to hold because π_{dw} is equal to one and c_{aw} is assumed large. If n is also large the analysis changes because

14

the instrumental stakes have been lowered by the lower probability of being decisive and for $\theta_{jw} > 0$ the individual receives an expressive payoff even though they are not decisive in determining whether the group behaviour is reciprocal or not. If the number of members of the weak group satisfying (10) passes the threshold necessary to provide hawks within the group the incentive to engage in violence and that they are not prevented by the doves within the group then aggression will be chosen as the group action. Clearly the smaller the threshold the more likely that aggression will be selected. This implies that a minority of the group in supporting violence may inflict conflict costs on all the group as the suppliers of violence require only a relatively low level of support, assuming that the doves cannot prevent the aggression from occurring. [7]

As is the case in the 2-player game it is straightforward to show that strong group members will choose aggression in response to aggression by the weak group because

$$(\pi_{as} + \pi_{ds}) \left(R - c_{as} - \frac{1}{2} \right) + \pi_{ps} \left(0 - \frac{3}{2} (1 - \theta_{js}) - \frac{1}{2} \theta_{js} \right) >$$

$$\pi_{as} \left(R - c_{as} - \frac{1}{2} (1 - \theta_{js}) - \frac{3}{2} \theta_{js} \right) + (\pi_{ps} + \pi_{ds}) \left(0 - \frac{3}{2} \right) \qquad (11)$$

which must hold because both the material and psychological payoffs are higher by choosing aggression than passivity.

Also it is straightforward, as before, to show that (pass, pass) cannot be a fairness equilibrium in the n-player game. The weak group shows no kindness towards the strong group in choosing passivity in response to passivity so psychological payoffs drop out. As a result, aggression is the best response for all members of the strong group.

In the Rabin analysis games played between two players are analysed. In these cases for psychological payoffs to dominate and fairness equilibria

---

[7]Note that θ is treated as exogenous, but it may be worth speculating whether that is likely to be the case in reality. Political competition will be fought between doves and hawks. The former within the weak group may have to depend on cognitive arguments regarding the costs of conflict, whereas hawks can make emotional appeals based on reciprocal aggression. That emotional appeals may be more effective than cognitive appeals is supported by Gadarian (2010) who finds, in the context of foreign policy attitudes in response to terrorism, that emotional cues rather than threatening information alone influence attitudes. Sheafer and Dvir-Gvirsman (2010) find, in the context of attitudes towards the Oslo peace process, that the public response to negative framing is much stronger than to positive framing. Hawks by recommending aggression frame the interaction with the other group negatively.

to emerge the stakes need to be relatively small. So for example, if we consider emotional rejection of offers in the ultimatum game, they are rejected because the psychological gain from rejecting the offer outweighs the low material gain. Rabin provides several convincing arguments to defend the theory against the charge that it is only relevant when it is relatively trivial and this paper attempts to extend this defence to incorporate the nature of group choice in a political setting. We argue that the act of choosing to meet aggression with aggression satisfies a sense of righteous indignation even if actual aggression does not take place. The material payoff, on the other hand, is subject to standard instrumental reasoning. Although the stakes may be exceptionally large if decisive, in mass political action individual decision-makers determine the outcome only with a small probability.[8]

3.2.2   Case 2: $\overline{\alpha}R < (R - c_{dw})$

We now turn to the case where $\overline{\alpha}R < (R - c_{dw})$ Inspection of the payoffs in the game inform us that the weak group would be displaying kindness towards the strong group if they choose passivity in response to passivity by the strong group and it is this that allows for the possibility of a (pass, pass) equilibrium and the maximisation of social surplus. The condition for (agg, agg) to be a fairness equilibrium (10) are the same as before. We now demonstrate the conditions for (pass, pass) to be an equilibrium. The value of $\widetilde{f}_s$ is now

$$\widetilde{f}_s = \frac{\overline{\alpha}R - \frac{1}{2}\overline{\alpha}R}{\overline{\alpha}R - 0} = \frac{1}{2} \tag{12}$$

If the weak group chooses passivity $f_w = \frac{1}{2}$ and if they deviate and choose aggression, $f_w = -\frac{1}{2}$. Therefore, passivity will be chosen if

$$(\pi_{aw} + \pi_{dw})\left(R - c_{dw} + \frac{1}{4}\right) + \pi_{pw}\left(\overline{\alpha}R + \frac{3}{4}(1 - \theta_{jw}) + \frac{1}{4}\theta_{jw}\right) <$$

$$\pi_{aw}\left(R - c_{dw} + \frac{1}{4}(1 - \theta_{jw}) + \frac{3}{4}\theta_{jw}\right) + (\pi_{pw} + \pi_{dw})\left(\overline{\alpha}R + \frac{3}{4}\right) \tag{13}$$

---

[8] The depiction of three possible states mirrors the analysis of peace, repression and war presented in Besley and Persson (2011). They argue that a lack of highly valued public goods and an uneven share of political power prevents peace. Whether or not there is war or repression depends on relative fighting abilities and costs of fighting. If one side has a clear advantage then we should expect repression. The analysis presented here suggests that this is not necessarily the case. If emotions are high, demand for violence is high and this support may generate sufficient ego rents to incentivise the supply of violence even when it has little hope of success.

which reduces to

$$\theta_{jw} > \frac{\pi_{dw}\left(2\left(R\left(1-\overline{\alpha}\right)-c_{dw}\right)-1\right)}{1-\pi_{dw}} \tag{14}$$

For the strong group, $\widetilde{f_w} = \frac{1}{2}$ so members will choose passivity over aggression if

$$\left(\pi_{as}+\pi_{ds}\right)\left(R-c_{ds}+\frac{1}{4}\right)+\pi_{ps}\left(\left(1-\overline{\alpha}\right)R+\frac{3}{4}\left(1-\theta_{js}\right)+\frac{1}{4}\theta_{js}\right) <$$

$$\pi_{as}\left(R-c_{ds}+\frac{1}{4}\left(1-\theta_{js}\right)+\frac{3}{4}\theta_{js}\right)+\left(\pi_{ps}+\pi_{ds}\right)\left(\left(1-\overline{\alpha}\right)R+\frac{3}{4}\right) \tag{15}$$

which reduces to

$$\theta_{js} > \frac{\pi_{ds}\left(2\left(\overline{\alpha}R-c_{ds}\right)-1\right)}{1-\pi_{ds}} \tag{16}$$

There are now two pure strategy fairness equilibria subject to (10), (14) and (16) holding for sufficient numbers of group members. At first glance this might look like a trivial problem of equilibrium selection. Since (pass, pass) Pareto dominates (agg, agg) then it would be expected that (pass, pass) will emerge as the equilibrium outcome. There are, however, a number of issues to explore. First, although (14) and (16) may hold for individual members of each group, it may not be the case that there is a sufficient support for peace that will discourage the potential suppliers of violence from providing it. In this case (pass, pass) cannot be an equilibrium even though we are in a scenario compared to case 1 where a positive level of support for peace can be generated in the strong group. This is particularly true if the level of support required for violence to occur is a minority of the group(s) population. Supposing the RHS of (10) and (14) to be of similar value, the same set of members who support reciprocal aggression in (10) support reciprocal passivity in (14). If the number in the former is a minority but sufficient to induce violence then it will be insufficient to prevent violence in the latter.

An interesting implication here is that those that are low in expressiveness (low θ) support passivity against aggression in (10) and aggression against passivity in (14). This makes sense. These are individuals that do not have a strong sense of indignation when confronted by an aggressive opponent so they also lack a sense of obligation when confronted by a passive opponent. Both cases might point to different types of conflict trap. In case 1, there are a sufficient number of individuals in the weak group that feel indignation such that they will provide support for aggression. In this case

expressiveness causes conflict. In case 2 there may be an insufficient number of individuals in both groups that feel a sense of obligation to the other group, such that support for aggression is sufficient for mutual aggression in equilibrium. In this case, a lack of expressiveness is the cause of conflict.

When only a minority support for aggression is required, it is still possible that (14) will provide sufficient support for peace if the RHS of (14) is sufficiently smaller than the RHS of (10), or $R\left(1-\overline{\alpha}\right)-c_{dw}<c_{aw}$. Clearly this is more likely to hold the larger is c_{aw} and the smaller the gain to the weak group in choosing aggression rather than passivity, given that the strong group chooses passivity. For the strong group (16) is more likely to hold if $\overline{\alpha}R$ is close to c_{ds} which means that there is little to be gained materially aggression over passivity.

Clearly both (14) and (16) are likely to hold if the perceptions of decisiveness π_{ds} and π_{ds} are very small. In this case low levels of expressiveness would still be sufficient to generate mutual peace. So if we suppose this is the case, it would be tempting to conclude that because (pass, pass) Pareto dominates (agg, agg) then we should expect the former to emerge as the equilibrium. Is it unrealistic to suppose that the latter outcome would struggle to emerge? One reason (although delving beyond the confines of the current model) would be that if there is no history of trust between the groups, that group members are emotional and that they perceive each other as inherently aggressive then (agg, agg) seems a quite plausible candidate as the equilibrium. It is clear that these features would appear to be common characteristics of many conflicts.

Finally, one key aspect of the analysis here is that roughly the same individual that will feel indignation when they feel they have been wronged will feel obligation when the other group is conciliatory. Perhaps, in reality, the two responses are not symmetric as Baumeister *et al* (2001) suggest in their discussion of 'bad is stronger than good' and Offerman (2002) in his discussion of 'hurting hurts more than helping helps'. If this is the case although the payoffs exist so that positive reciprocation should exist, any psychological tendency for the 'bad' to drive out the 'good' may eliminate the possibility of a peaceful equilibrium. An explanation that both papers offer for this is self-serving bias, so that good events are attributed to internal causes, but bad events are attributed to external causes.[9]

---

[9]This insight would, of course, be in keeping with our earlier discussion regarding the possibility that θ may be endogenous to political competition between doves and hawks. It may not just be that θ is positively responsive to emotional rather than cognitive appeals, it may also be more responsive to negatively framed emotional appeals than emotional appeals that are positively framed. Indignation may be a more powerful motivator than

4   Conclusion

Section 3 finished in an optimistic (if guarded) fashion. When it is the case that the weak group is actually making material sacrifices to choose passivity in response to passivity by the strong group then mutual peace may emerge as a fairness equilibrium. But the main inspiration for this paper was to rationalise 'irrational' conflict, not to rationalise 'irrational' peace. So where we observe mutual conflict of the sort exhibited in this paper, what has been the cause? If we turn to case 1, the cause is straightforward. Members of the strong group do not see any sacrifice on the part of the weak group members if they were to choose passivity. For that reason, they will choose aggression in response to passivity as it maximises their material payoff. If the weak group were purely materially motivated (pass, agg) would be the Nash equilibrium of the game. However, because weak group members (having discounted their likelihood of being decisive) may be angered by the aggression shown by the strong group they may emotionally choose aggression in response. Clearly, aggression would then be the materially and emotionally best response by the strong group and thus 'irrational' conflict can emerge. The 'irrationality' can be viewed from the perspective that there are two outcomes that are Pareto superior to (agg, agg), namely (pass, agg) and (pass, pass). The latter suffers from the familiar public good type problem that it is a dominated strategy for the strong group and thus it is individually rational for strong group members to choose aggression. Although the reason for (pass, pass) not being an equilibrium in case 1 is clear enough it does beg the question explored by Fearon (1995) as to why an outcome which would maximise social surplus cannot be reached. He provides three main reasons; 1) asymmetric information; 2) commitment problems and 3) issue indivisibilities. This paper does not dig deeply into why an inefficient outcome is allowed to persist, but in the context of this paper both commitment problems and issue indivisibilities would be relevant. The innovation in this paper is to argue that emotions are required in addition to these problems to generate mutual aggression, otherwise the outcome would be the peaceful (though inefficient) dictatorship by the strong group. The (agg, agg) outcome is driven by emotions of the kind explored by Rabin, but the explanation for why they feature heavily in this paper is not that the stakes are small, but rather that the stakes are made to seem small due to mass collective action rendering individuals largely non-decisive in determining political outcomes.

---

obligation.

19

Case 2 is clearly more hopeful, but an (agg, agg) outcome is still a fairness equilibrium. This case opens issues in the study of conflict for which this paper might provide some initial insights. In case 1, ultimately the reason there is conflict is that from the perspective of the strong group passivity displayed by the weak group provides them with no positive utility through reciprocation. If the weak group could be viewed as making a sacrifice then those that seek peace within the strong group would have something to work with when fighting for support.

So in a richer model with incomplete information, it would be interesting to explore the idea that the true state of payoffs for the weak group is unknown to the strong group. If the strong group holds that on observing passivity by the weak group that the weak group is playing its dominant strategy, an emotionally charged weak group may ensure that these beliefs are held out-of-equilibrium as they would only choose aggression anticipating aggression by the strong group.[10] To that extent, it shifts the attention from focussing on why the weak group takes actions that clearly seems against their material interest to the way in which group interaction is perceived within the strong group. If it is the case that the weak group really can make sacrifices it is important for the prospects for peace that members of the strong group can come to believe this and that they can enjoy utility from positive reciprocity just as they can enjoy hurting the other group if they feel it is hurting them. If they do, mutual peace becomes a possibility if political interaction is treated as emotional as well as material in nature.

References

[1] Baumeister, Roy F, Ellen Bratslavsky, Catrin Finkenauer and Kathleen D.Vohs. 2001."Bad is Stronger than Good." *Review of General Psychology* 5(4):323-370.

[2] Berman, Eli, Jacob N. Shapiro and Joseph H Felter. 2011. "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq." *Journal of Political Economy* 119(4):766-819.

[3] Bernholz, Peter. 2004. "Supreme Values as the Basis for Terror." *European Journal of Political Economy* 20(2): 317-333.

---

[10]For a similar idea see Glaesar (2005).

[4] Besley, Timothy, and Torsten Persson. 2011. *Pillars of Prosperity: The Political Economics of Development Clusters.* Princeton: Princeton University Press.

[5] Bolton, Gary E., and Axel Ockenfels. 2000. "ERC: A theory of equity, reciprocity, and competition." *American Economic Review* 90(1):166-193.

[6] Brennan, Geoffrey, and Loren Lomasky. 1993. *Democracy and Decision: The Pure Theory of Electoral Preference.* Cambridge: Cambridge University Press.

[7] Bueno de Mesquita, Ethan. 2005. "The Quality of Terror." *American Journal of Political Science* 49(3):515-530.

[8] Bueno de Mesquita, Ethan, and Eric S. Dickson. 2007. "The Propaganda of the Deed: Terrorism, Counterterrorism, and Mobilization." *American Journal of Political Science* 51 (2):364-381.

[9] Cetinyan, Rupen. 2002. "Ethnic Bargaining in the Shadow of Third-Party Intervention." *International Organization* 56(3):645-677.

[10] Collier, Paul, and Anke Hoeffler. 2004. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56(4):563-595.

[11] de Figueiredo, Rui J.P. Jr., and Barry Weingast. 2001. Vicious Cycles: Endogenous Political Extremism and Political Violence." Institute of Governmental Studies Working Paper, 2001-9.

[12] Dufwenberg, Martin, and Georg Kirchsteiger. 2004. "A Theory of Sequential Reciprocity." *Games and Economic Behavior* 47(2):268-298.

[13] Falk, Armin., and Urs Fischbacher. 2006. "A Theory of Reciprocity." *Games and Economic Behavior* 54(2):293-315.

[14] Fearon, James D. 1995. "Rationalist Explanations for War." *International Organization* 49(3):379-414.

[15] Fearon, James D.. 2004. "Why do some Civil Wars Last so Much Longer than Others?" *Journal of Peace Research* 41(3):275-301.

[16] Fearon, James D.. 2006. "Ethnic Mobilisation and Ethnic Violence." In *The Oxford Handbook of Political Economy*, eds. Barry R Weingast and Donald A. Wittman. Oxford: Oxford University Press,pp.852-868 .

[17] Fearon, James D., and David D. Laitin. 2000. "Violence and the Social Construction of Ethnic Identity." *International Organization* 54(4):845-877.

[18] Fearon, James D., and David D. Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97(1):75-90.

[19] Fehr, Ernst, and Klaus M. Schmidt. 1999. "A Theory of Fairness,Competition and Cooperation." *Quarterly Journal of Economics* 114(3):817-868.

[20] Gadarian, Shana K. 2010. "The Politics of Threat: How Terrorism News Shapes Foreign Policy Attitudes." *Journal of Politics*, 72(2):469-483.

[21] Ginkel, John and Alastair Smith. 1999. "So You Say You Want a Revolution: A Game Theoretic Explanation of Revolution in Repressive Regimes." *Journal of Conflict Resolution* 43(3):291-316.

[22] Glaesar, Edward L. 2005. "The Political Economy of Hatred." *Quarterly Journal of Economics* 120(1): 45-86.

[23] Gordon, Carol, and Asher Arian. 2001. "Threat and Decision-Making." *Journal of Conflict Resolution* 45(2):196-215.

[24] Halperin, Eran. 2010. "Group-Based Hatred in Intractable Conflict in Israel." *Journal of Conflict Resolution* 52(5):713-736.

[25] Halperin, Eran and Daniel Bar-Tal. 2011. "Socio-Psychological Barriers to Peace Making: An Empirical Examination within the Israeli Jewish Society." *Journal of Peace Research* 48(5): 637-651.

[26] Hamlin, Alan,.and Colin Jennings. 2007. "Leadership and Conflict." *Journal of Economic Behavior and Organization* 64(1):49-68.

[27] Hamlin, Alan,.and, Colin Jennings. 2011. "Expressive Political Behaviour: Foundations, Scope and Implications." *British Journal of Political Science* 41(3):645-670.

[28] Hillman, Arye L. 2010. "Expressive Political Behavior Economics and Politics." *European Journal of Political Economy* 26(4):403-418.

[29] Horowitz, Donald L. 1985. *Ethnic Groups in Conflict.* Berkeley: University of California Press.

[30] Jaegar, David A, Esteban F. Klor, Sami H. Miaari and M. Daniele Paserman.2012. "Can Militants use Violence to Win Public Support? Evidence from the Second Intifada." Journal of Public Economics 96(3-4): 354-368.

[31] Jennings, Colin. 2011. "Intra-Group Competition and Inter-Group Conflict: An Application to Northern Ireland." *Defence and Peace Economics* 22(1):63-83.

[32] Krueger, Alan B., and Jitka Maleckova. 2009. "Attitudes and Action: Public Opinion and the Occurrence of International Terrorism." *Science* 325:1534-1536.

[33] Kydd, Andrew, and Barbara F. Walter. 2002. "Sabotaging the Peace: The Politics of Religious Violence." *International Organization* 56(2):263-296.

[34] Laitin, David D. 1995. "National Revivals and Violence." *European Journal of Sociology* 36(1):3-43.

[35] Maleckova, Jitka, and Dragana Stanisic. 2011. "Public opinion and terrorist acts." *European Journal of Political Economy* 27: S101-S121.

[36] Maoz, Ifat., and Clark McAuley. 2008. "Threat, Dehumanization, and Support for Retaliatory Aggressive Policies in Asymmetric Conflict." *Journal of Conflict Resolution* 52(1):93-116.

[37] Offerman, Theo. 2002. "Hurting Hurts More than Helping Helps." *European Economic Review* 46(8): 1423-1437.

[38] Powell, Robert. 2006. "War as a Commitment Problem." *International Organization* 60(1):169-203.

[39] Rabin, Matthew. 1993. "Incorporating Fairness into Game Theory and Economics." *American Economic Review* 83(5):1281-1302.

[40] Rosendorff, B. Peter, and Todd Sandler. 2004. "Too Much of a Good Thing? The Proactive Response Dilemma." *Journal of Conflict Resolution* 48(4):657-671.

[41] Sambanis, Nicholas. 2004. "Using Case Studies to Expand Economic Models of Civil War." *Perspectives on Politics* 2(2):259-279.

[42] Sheafer, Tamir, and Shira Dvir-Gvirsman. 2010. "The Spoiler Effect: Framing Attitudes and Expectations towards Peace." *Journal of Peace Research* 47(2):205-215.

[43] Siqueira, Kevin, and Todd Sandler. 2006. "Terrorists Versus the Government: Strategic Interaction, Support, and Sponsorship." *Journal of Conflict Resolution* 50(6):878-898.

[44] Tessler, Mark, and Michael D. H. Robbins. 2007. "What leads some Ordinary Arab Men and Women to approve of Terrorist Attacks against the United States?" *Journal of Conflict Resolution* 51(2):305-328.