

Rationalising 'Irrational' Support for Political Violence

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Abstract

This paper provides a rationale for group support for political violence in situations where violence does not provide a material benefit. Rabin’s (1993) 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.

Keywords: conflict; emotions; reciprocity; expressive; rhetoric

JEL Codes: 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 interethnic violence is strongly related to *intraethnic* 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 (which is one of complete information), is that they are not sufficient to explain the existence of group conflict which 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 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

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

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

model of the demand for violence but one that can be incorporated within a rational choice model.

This paper explores the idea that 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 has 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 also for a small cost of aggression they are 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.

We incorporate emotions by turning to behavioural economics and Rabin's (1993) theory of fairness and explore 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 falls such that the instrumental stakes fall (Brennan and Lomasky (1993)). 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. We incorporate a key role for intra-group competition by focussing on the rhetoric that is used in political competition. Politicians seeking violence may not need to make the claim that violence brings material rewards, rather they simply need to ensure that group members view interaction with the other group through an emotional lens. To that end we depict political competition between doves and hawks as one that might focus more on a battle between cognitive and emotional appeals rather than a focus on issues (such as territorial claims) for which there may be little

disagreement within the group. In addition, it will be argued that there may be heterogeneity within the group with regard to the ability of individual group members to detach themselves from an emotional perspective.

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 to 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 to use violence in situations where it makes them worse-off. The phenomenon of insurgent violence, met by incumbent crackdowns, followed by support from members of both groups for the use of violence would seem fairly self-evident. 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 (2010) study the phenomenon of support for violence in Palestine.

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 (forthcoming) 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 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 they 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 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 are the focus of 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 (emotional goals and action tendencies) 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.

A key aspect of this paper is that political competition between doves will be fought through the use of rhetoric; whereby 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. Sheaffer 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. In

this paper hawks by recommending aggression frame the interaction with the other group negatively.

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. For an overview of work on expressive choice see Hamlin and Jennings (forthcoming), Hillman (2010) and to a large extent the analysis of expressive choice in a conflict setting expands upon the depiction of expressive choice presented in Hamlin and Jennings (2007) and Jennings (forthcoming). Finally, we also allow for the possibility that individuals can control their emotions, although such control may be costly. This picks up on the literature in behavioural economics that recognises emotions as an example of a visceral determinant of behaviour, but also that there may be mechanisms available for individuals to self-control. See Lowenstein (2003) for a review.

3. The Model

We will depict a three-stage game, with each stage being played simultaneously in a strong group and a weak group. In stage 1, hawks and doves in each group make rhetorical appeals for support which appeal to material and/or emotional concerns. In stage 2, members of both groups can consciously decide to control their emotions if the expected gain from doing so outweighs the cost of such control. The cost of controlling emotions may be influenced by the rhetoric used in stage 1. Then in stage 3, group members will choose whether to support aggression or passivity in response to aggression or passivity by the other group. Group members will be aware that it is only with a small probability that their individual choice actually determines the action that their group will select. We will study each stage in turn working backwards from stage 3.

3.1.1 Stage 3

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

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

Figure 1

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. 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 dictate to 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 is higher for the weak group than the strong group so that $c_{ds} < c_{dw} \cdot c_{aw}$ is the cost of aggression to a weak group when there is mutual aggression and likewise c_{as} is the cost of aggression for the strong group when there is mutual aggression. We assume that $c_{dw} < c_{aw}$ 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 $0 \leq \alpha \leq 1$, α 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 equals 1 and the lowest payoff equals 4) is as follows

		Strong Group	
		agg	pass
Weak Group	agg	4, 3	1 or 2, 4
	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, $\alpha > c_{ds}$ is an assumption, but one that is justifiable where bargaining outcomes cannot be smoothed so it is not possible for the value of α 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 don't incur aggression costs. We will analyse two different permutations of payoffs based on the following possibilities. If the weak group is very weak (pass, pass) may be preferable (agg, pass) as the costs of aggression (even 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 αR to 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 αR , 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.

3.1.2 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.³ 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, $f_w(a_w, b_s)$ and the weak player's perception of the strong player's kindness $\tilde{f}_s(b_s, c_w)$. These are expressed as follows

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

and

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

$\pi_s^{fair}(b_s)$ is defined as $[\pi_s^h(b_s) + \pi_s^l(b_s)]/2$ where $\pi_s^h(b_s)$ and $\pi_s^l(b_s)$ are Pareto efficient and likewise for $\pi_w^{fair}(c_w)$.

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

$$U_w(a_w, b_s, c_w) = \pi_w(a_w, b_s) + \tilde{f}_s(b_s, c_w) \cdot [1 + f_w(a_w, b_s)] \quad (3)$$

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

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

$$(1) a_w \in \arg \max_{a_w \in \{agg, pass\}} U_w(a, b_s, c_w)$$

$$(2) c_w = b_w = a_w$$

³ In addition to the Rabin article itself, see the textbook discussion in Wilkinson (2008).

3.1.3 Analysis of the Game

A key point to note is that in an environment where only material payoffs count for utility, regardless of whether $(R - c_{dw})$ is greater or less than αR 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 consider the possibility that some group members view the game as a purely material one, but others will view it as containing psychological payoffs. Incorporating psychological payoffs may change equilibria. We will demonstrate for small enough probability of being decisive, in the case where $\alpha R > (R - c_{dw})$, (agg, agg) is a unique fairness equilibrium. In the case where $\alpha R < (R - c_{dw})$ for small enough probability of being decisive there are two fairness equilibria, (agg, agg) and (pass, pass).

4. Case 1: $\alpha R > (R - c_{dw})$

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_s players in the strong group and n_w players in the weak group simultaneously choosing their preferred action under the assumption that they determine the outcome with probability $1/n_s$ and $1/n_w$ respectively. This means that even if only one member chooses aggression it happens as a group action with positive probability albeit very small if n is large.

4.1.1 Stage 3 in the Two Player Case

We begin by deriving \tilde{f}_s . If the weak group member believes that the strong group believes they are choosing aggression and that the strong group chooses aggression in response, they are being unkind to the weak group as shown by

$$\tilde{f}_s = \frac{-c_{aw} - \frac{1}{2}(R - c_{dw} - c_{aw})}{(R - c_{dw}) + c_{aw}} = -\frac{1}{2} \quad (4)$$

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

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

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

$$-c_{aw} - \frac{1}{2}[1-1] > 0 - \frac{1}{2}[1-0] \quad (6)$$

which reduces to

$$\frac{1}{2c_{aw}} > 1 \quad (7)$$

It is straightforward to check that the strong group would choose aggression in response to weak group aggression. As part of their utility function, $\tilde{f}_w = -1$. So the strong group will choose aggression because $(R - c_{as}) - 1[1 - \frac{1}{2}] > 0 - 1[1 + \frac{1}{2}]$. 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 $\tilde{f}_w = 0$. 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 (7) will not hold. Psychological payoffs are swamped by material payoffs and the equilibrium will be (pass, agg).

4.1.2 Stage 3 in the n-Player Case

The analysis is now extended to allow for large groups. For ease of exposition we will assume that each group is of size n . It is assumed that when each individual makes a decision their choice of action makes that group action more likely with a probability of $1/n$. In the following analysis n_a is the number of group members that support aggression and n_p is the number that support passivity. To capture the role of expressive payoffs a weight j is introduced where $0 \leq j \leq 1$. The weak group member

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

$$\begin{aligned}
& -\frac{n_a c_{aw}}{n} + \frac{n_p}{n}(0) - \frac{c_{aw}}{n} + \frac{n_a}{n}(0) + \frac{1}{n}(0) - \frac{n_p}{n}\left(\frac{1}{2}\right)(1-j) + \frac{n_p}{n}(0)j > \\
& -\frac{n_a c_{aw}}{n} + \frac{n_p}{n}(0) + \frac{1}{n}(0) + \frac{n_a}{n}(0)(1-j) - \frac{n_a}{n}\left(\frac{1}{2}\right)j - \frac{1}{n}\left(\frac{1}{2}\right) - \frac{n_p}{n}\left(\frac{1}{2}\right)
\end{aligned} \tag{8}$$

Which reduces to

$$\frac{1}{2c_{aw}} > \frac{1}{nj+1-j} \tag{9}$$

If $j=0$ 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 $j=1$ 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 $j=1$ 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 $j > 0$ there is an expressive component to the individual's choice, and from (9) we see that in the limit where $j=1$ aggression will be selected by an individual if

$$\frac{1}{2c_{aw}} > \frac{1}{n}$$

Earlier we stated that in a 2-player game ($n=1$) we would not expect this condition to hold because c_{aw} is assumed large. If n is also large the analysis changes because the instrumental stakes have been lowered by the lower probability of being decisive and for $j > 0$ the individual receives an expressive payoff even though they are not decisive in determining whether the group behaviour is reciprocal or not.

As for 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

$$\begin{aligned} & \frac{n_a(R-c_{as})}{n} + \frac{n_p}{n}(0) + \frac{1(R-c_{as})}{n} - \frac{n_a}{n}\left(\frac{1}{2}\right) - \frac{1}{n}\left(\frac{1}{2}\right) - \frac{n_p}{n}\left(\frac{3}{2}\right)(1-j) - \frac{n_p}{n}\left(\frac{1}{2}\right)j > \\ & \frac{n_a(R-c_{as})}{n} + \frac{n_p}{n}(0) + \frac{1}{n}(0) - \frac{n_a}{n}\left(\frac{1}{2}\right)(1-j) - \frac{n_a}{n}\left(\frac{3}{2}\right)j - \frac{1}{n}\left(\frac{3}{2}\right) - \frac{n_p}{n}\left(\frac{3}{2}\right) \end{aligned} \quad (10)$$

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.

Note also that we allow, and will analyse in stage 2 of the game, the possibility that members of the both groups can choose to control their emotions and view the game as purely material. This will make no difference to the decision for members of the strong group. They will choose aggression whether they are emotional or not. For weak group members, if they are emotional and (9) holds they will choose aggression in response to aggression, but if they are not emotional they will choose passivity in response to aggression.

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

4.2 Stage 2

In stage 3 members of both groups can decide whether to choose aggression or passivity as their choice of group action and they will be decisive with probability 1/n.

If (9) holds, those that are emotional within the weak group will select aggression and those that are unemotional will choose passivity. In the strong group, the presence or absence of emotions does not affect the decision which is to choose aggression. Why might a member choose to be emotional and another member not. We focus first on members of the weak group.

Working backwards from stage 3, a member will choose to control his emotions if

$$-\frac{n_a c_{aw}}{n} - \frac{c_{aw}}{n} - \frac{n_p (1-j)}{2n} < -\frac{n_a c_{aw}}{n} - v \quad (11)$$

or

$$\frac{c_{aw}}{n} + \frac{n_p (1-j)}{2n} > v \quad (12)$$

This tells us that if the cost of incurring aggression costs weighted by the probability of bringing it about and the extent to which an individual absorbs the psychological cost of a group decision to choose passivity despite choosing aggression himself outweighs the cost of controlling emotions, then the weak group member will control his emotions.

If all $v < \frac{c_{aw}}{n}$ then all will self-control and aggression will not be selected by any members of the weak group. If all $v > \frac{c_{aw}}{n} + \frac{(1-j)}{2}$ all group members will choose not to self-control and choose aggression in stage 3. We allow for the intermediate possibility to be possible. This requires that if we order group members in terms of their cost of v , v must increase faster than $\frac{(1-j)}{2}$ which is the rate at which the cost of emotional decision-making increases as more members choose passivity.

In the strong group we can see that some members may also choose to control their emotions although this would not alter their decision to choose aggression in stage 3. This follows from (10) and will happen if $v < \frac{1}{2}$ given that all members choose aggression in stage 3.

4.3 Stage 1

We have depicted one source of heterogeneity within a group; the ability to control emotions. A second is that some individuals will wish to become leaders of the group and of these types some will have a preference for the pursuit of aggression (hawks) and some for the pursuit of passivity (doves). We do not endogenise for these

potential leaders and they are not treated as strategic. We simply present hawks as arguing for aggression and doves as arguing for peace, but the strength of their argument is determined by the future play of the game.

Note that in the strong group the dove has no chance of success against the hawk. Materially and psychologically members of the strong group are better choosing aggression against any action the weak group might take. The interesting battle is in the weak group. It is clear that weak group members will be better off materially if they choose passivity, but they will be better off psychologically if they reciprocate strong group aggression with aggression of their own. This means that weak group doves must make a cognitive argument for passivity, while the weak group hawks can make an emotional argument for aggression. As discussed in the literature review it is argued that emotional appeals are considered to be more effective than cognitive appeals. Here the argument would be one of standing up against injustice rather than meekly conceding for the sake of self-preservation. This could be formalised by making v a function of stage 1 of political rhetoric, such that v is increased for all group members after stage 1 because the hawk possesses a rhetorical advantage in being able to make emotional appeals to group members to stand up against injustice. This would reduce the number of weak group members that would choose to self-control in stage 2 and thus choose passivity in stage 3.

4.4. Summary

To summarise for $\alpha R > (R - c_{dw})$, the key result is that the Nash equilibrium (pass, agg) can be overturned for a unique fairness equilibrium (agg, agg). This is made more likely because politicians in the weak group seeking aggression can increase the initial values of v in stage 1 because the language of justice is on their side. The behaviour of the strong group is uncomplicated. Although some members of that group (with low values of v) will control their negative emotions, strong group doves have no basis upon which they can make a case for group members to prefer passivity to aggression. The reason is that aggression in response to aggression is both materially in group members' interests and accords with their sense of justice by hurting the weak group which is hurting them. In addition, they can make no case for pursuing passivity which will be met by passivity by the weak group because passive behaviour by the weak group is not considered an act of kindness by strong group members and thus there is no case for making material sacrifices to help a group

which is helping them. Note though that if some weak group members do choose to self-control, passivity will be chosen with positive probability by the weak group. This means that (pass, agg) would still exist as a possible equilibrium of the game although this would be a Nash equilibrium and not a fairness equilibrium.

5. Case 2: $\alpha R < (R - c_{dw})$

We now turn to the case where $\alpha R < (R - c_{dw})$. 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 (9) are the same as before. We now demonstrate the conditions for (pass, pass) to be an equilibrium. The value of \tilde{f}_s is now

$$\tilde{f}_s = \frac{\alpha R - \frac{1}{2}\alpha R}{\alpha R - 0} = \frac{1}{2} \quad (13)$$

If the weak group chooses aggression, $f_w = -1/2$ and if they choose passivity, $f_w = 1/2$. Therefore, passivity will be chosen if

$$\begin{aligned} \frac{n_a(R - c_{dw})}{n} + \frac{n_p(\alpha R)}{n} + \frac{(R - c_{dw})}{n} + \frac{n_a\left(\frac{1}{4}\right) + \frac{1}{n}\left(\frac{1}{4}\right) + \frac{n_p\left(\frac{3}{4}\right)(1-j) + \frac{n_p\left(\frac{1}{4}\right)j}{n}}{n} < \\ \frac{n_a(R - c_{dw})}{n} + \frac{n_p(\alpha R)}{n} + \frac{\alpha R}{n} + \frac{n_a\left(\frac{1}{4}\right)(1-j) + \frac{n_a\left(\frac{3}{4}\right)j + \frac{1}{n}\left(\frac{3}{4}\right) + \frac{n_p\left(\frac{3}{4}\right)}{n}}{n} \end{aligned} \quad (14)$$

which reduces to

$$\frac{1}{2(R(1-\alpha) - c_{dw})} > \frac{1}{nj + 1 - j} \quad (15)$$

For the strong group, $\tilde{f}_w = 1/2$ so members will choose passivity over aggression if

$$\begin{aligned} \frac{n_a(R - c_{ds})}{n} + \frac{n_p(1-\alpha)R}{n} + \frac{(R - c_{ds})}{n} + \frac{n_a\left(\frac{1}{4}\right) + \frac{1}{n}\left(\frac{1}{4}\right) + \frac{n_p\left(\frac{3}{2}\right)(1-j) + \frac{n_p\left(\frac{1}{4}\right)j}{n}}{n} < \\ \frac{n_a(R - c_{ds})}{n} + \frac{n_p(1-\alpha)R}{n} + \frac{(1-\alpha)R}{n} + \frac{n_a\left(\frac{1}{4}\right)(1-j) + \frac{n_a\left(\frac{3}{4}\right)j + \frac{1}{n}\left(\frac{3}{4}\right) + \frac{n_p\left(\frac{3}{4}\right)}{n}}{n} \end{aligned} \quad (16)$$

which reduces to

$$\frac{1}{2(\alpha R - c_{ds})} > \frac{1}{nj + 1 - j} \quad (17)$$

There are now two pure strategy fairness equilibria, so we have a familiar coordination problem but one where (pass, pass) Pareto dominates (agg, agg). Both of these potential fairness equilibria will be considered in turn starting with (pass, pass).

Since the utility from reciprocating passivity is big enough in both groups to outweigh the material loss that passivity entails as shown in (15) and (17), no member in stage 2 would choose to control their emotions as they would be incurring a cost v to obtain a $1/n$ gain in material payoff and lose the positive psychological payoffs that made choosing passivity preferable. In stage 1, the doves in both groups can make emotional arguments for peace because it reciprocates an act of sacrifice by the other group. In case 1, passivity by the weak group was not viewed as an act worthy of reciprocation by the strong group as it involved no sacrifice by the weak group. In fact, in case 1 it was in the material interest of the weak group to choose passivity over aggression. In this fairness equilibrium, v plays no functional role as no individual will choose to control emotions in stage 2 as they would be incurring a cost to rid themselves of a positive benefit.

We now turn to the (agg, agg) fairness equilibrium. Earlier in case 1 we argued that that this equilibrium will emerge with a probability less than 1 if some members of the weak group choose to control their emotions. With a positive probability (pass, agg) will emerge as the equilibrium which, of course, is the equilibrium of the game when it only involves material payoffs. If the group decision is made by emotional members of the group then (agg, agg) is a stable equilibrium because as in case 1 emotional and non-emotional members of the strong group would not revise their aggressive best response.

However, if the group decision is made by the non-emotional members of the weak group to be passive, then the composition of strong group types (determined in stage 2) now matters. Emotional members of the strong group would wish to revise their choice and choose passivity in response to passivity, but the best response to strong group passivity is aggression for non-emotional weak group members which would undermine (pass, agg) as an equilibrium of the game. If, however, the strong group decision were made by non-emotional materially motivated members (pass, agg) would be a stable equilibrium. Interestingly this implies that if the members of the weak group that controlled their emotions in stage 2 and proved to determine the

weak group choice to be passive, could then switch their emotions back on again in stage 3 then (pass,pass) would emerge as an equilibrium. Given that (pass, pass) Pareto dominates (agg, agg) is it realistic to suppose that the latter outcome would ever 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.

6. Discussion

Section 3 finished in a rather optimistic 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.

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.⁴ 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. If they do, mutual peace becomes a possibility if political interaction is treated as emotional as well as material in nature.

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⁴ For a similar idea see Glaesar (2005).

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