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# A rent-seeking perspective on imperial peace

**By**

**Indraneel Dasgupta**

**Abstract**

We model a rent-seeking contest among two ‘identity ideologues’, differentially located along a uni-dimensional identity continuum, and a ‘mercenary’, who can choose any location in-between. The contest jointly awards an identity-relevant good (‘religion’) and an identity-irrelevant good (‘money’). The mercenary values only money, the ideologues value both money and religion. The ideologues are worse off, at an increasing rate, when the winner is located farther away. We show that, under reasonable restrictions, the following hold. A decline in the mercenary’s cost of contest effort reduces conflict. Both ideologues lose in success probability but gain in expected utility. Elimination of the mercenary increases conflict and makes the ideologues more successful yet worse off. Our results rationalize ‘imperial peace’ – long periods of stability and social peace in multi-ethnic empires and explain why the weakening and breakdown of such empires is often associated with a sharp rise in ethnic violence within their territories.

**JEL Classification:** D72; D74

**Keywords:** Rent-seeking contest, Identitarian distance, Ethnic conflict, Imperial peace, Decolonization.

**Centre for Research in Economic Development and International Trade, University of Nottingham**

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**Outline**



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## 1. Introduction

In standard models of rent-seeking contests, a fall in one contestant's opportunity cost of rent-seeking typically increases conflict and makes its opponents worse off. The entry of a new contestant, too, exacerbates conflict and makes other contestants worse off.[1]

These conclusions seem to present a puzzle for the history of social conflicts in multi-ethnic empires. The stabilization of central power in multi-ethnic empires such as the British, Austro-Hungarian, Ottoman and Tsarist ones produced 'imperial peace' - prolonged periods of relative social harmony. Furthermore, despite the state engaging in resource extraction from the population, these empires were long-lasting, suggesting that the imperial powers faced weak popular resistance to their authority. Conversely, both the weakening of central power in these empires in the late 19th and 20th centuries, and their fragmentation into nation states with large ethnic minorities, were associated with a sharp increase in ethnic conflict, including civil war, genocide and ethnic cleansing. As Ferguson (2006, p. 176) concludes, while discussing ethnic violence during the closing years of the Ottoman Empire: "the worst time to live under imperial rule is when that rule is crumbling. Not for the last time in the twentieth century, the decline and fall of an empire caused more bloodshed than its rise."[2]

Why did imperial powers enjoy broad legitimacy among their multi-ethnic subjects, despite extracting enormous resources from them? Why did the weakening of one player – the imperial center – which may be intuitively expected to reduce competition over resource

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1 See, for example, Nti (1999) for the first set of results. Katz and Tokatlidu (1996), Warneryd (1998), and Hausken (2005) are examples of contributions discussing the second set.

2 The Balkan wars of 1912-13, which destroyed the Ottoman Empire in Europe, led to massive ethnic cleansing – see Ferguson (2006, pp.76-77). In Eastern Europe, WW I dissolved multi-ethnic empires and ethnically mixed communities. In 1917 and 1918, expectations of independence in Poland and the Ukraine precipitated bitter fighting between the various ethnic groups in Galicia. In the years immediately following the breakdown of the Tsarist empire, ethnic conflict flared up in the Baltic states, in the Caucasus, and in Kazakhstan. German and Jewish minorities in Poland, Czechoslovakia, Romania and Hungary suffered persecution after the collapse of the Tsarist and Austro-Hungarian empires. In eastern Poland, a low intensity civil war raged between Poles and Ukrainians. The Armenian genocide of 1915 was an especially horrific illustration of the violence that could seize a multi-ethnic polity mutating from empire into nation state. After Turkish troops massacred Greeks and Armenians in Smyrna (modern Izmir, Turkey) in 1922, there was a wholesale population exchange between Turkey and Greece. See Ferguson (2006, chapter 5) for a detailed discussion of the multiple ethnic conflicts that raged in the inter-war period within the states that replaced the Ottoman, Tsarist and Austro-Hungarian empires. Similarly, the decline and fall of the British Empire was attended by bitter violence between Hindus and Muslims in India; Israelis and Arabs in Palestine and Sunnis and Shi'ites in Iraq. There were few happy endings as the European empires expired after WW II. Even when the transition to independence went smoothly, ethnic violence often followed soon after, as in sub-Saharan Africa.

extraction, increase conflict instead of reducing it? Why did the collapse or withdrawal of the imperial center, typically through defeats in external wars, lead to explosive outbreaks of ethnic violence in successor states?

One might argue that imperial centres introduced new technology and institutions, thereby increasing productivity, and that this reduced expropriative conflict. However, an increase in productivity has an ambiguous effect on appropriative conflict – it increases the opportunity cost of appropriation vis-à-vis production, but it also increases the overall surplus available for contestation. Thus, the net effect on appropriative conflict is ambiguous, as is standard in production versus appropriation models of social conflict.[3] Second, since new technology and institutions, once introduced, typically became embedded within subject societies, it is not clear why the subsequent weakening or removal of the imperial centre should dramatically increase ethnic conflict. Thus, the technology and institutions argument appears to provide, at best, only a partial explanation.

An additional, complementary intuitive answer may be that imperial power centers often acted as a 'buffer' between mutually antagonistic ethnic groups sharply divided along religious, linguistic or other identity fault lines. The imperial administrators tried to keep the part of public space under their control roughly equidistant from contending identity groups within their subject populations, thereby playing the role, at least in theory, of a neutral arbitrator between conflicting extra-economic identity claims.[4] This provided them a certain amount of legitimacy, which weakened popular challenges to their dominance[5] and permitted them to extract higher economic rents from the subject population.[6] This buffer function also

3 See, for example, Hausken (2005), Caruso (2010) and Bakshi and Dasgupta (2020, 2021).

4 For example, Rai (2004, p. 93) notes that "in British India religion was, even if only theoretically, relegated to a space subordinate to the 'secular' and the 'public.'" This was in particular the case after 1857. We discuss the case of British India in detail in section 6 below.

5 "We divide and you rule. The moment we decide not to divide you will not be able to rule …" – a 1930 statement by the Indian nationalist politician Maulana Mohammed Ali – illustrates well the understanding that pre-existing local identity divides helped the British maintain control over colonies like India. (Ali, 1930: https://franpritchett.com/00islamlinks/txt_muhammadali_1930.html). A passage in Joseph Roth's classic 1932 novel set in the closing years of the Austro-Hungarian empire, *The Radetzky March*, similarly suggests that ethnic tension among subject populations may have served to legitimize imperial control: "Jelacich, a Slovene … hated the Hungarians as much as he despised the Serbs. He loved the monarchy" (Roth 1995, p.386).

6 That the state may act as a buffer between contending identity groups in its own pecuniary interest was noted early on by, for example, Ibn Battuta, the 14th century Moroccan traveller. Battuta writes of the South Indian town of Mangalore which was still under Hindu rule. A community of 4,000 Muslim merchants lived in a suburb near the Hindu town. Battuta observes that "war frequently breaks out between them (the Muslims) and the (Hindu) inhabitants of the town; but the Sultan (the Hindu King) keeps them at peace because he needs the merchants" (Gaborieau 1985, p.12).

sometimes provides an at least partial functional explanation for the success of foreign interventions and the rise of stable colonial empires in the first place.[7] Conversely, the weakening of the imperial center, and their eventual elimination, opened up larger areas of public life to direct competition between antagonistic identity groups, thereby increasing conflict.

The idea that, when neither of two deeply divided forces can defeat the other, a third force is likely to arise, pose itself as the protector of each against the other, and thereby extend sway over both, while materially benefiting itself in the process, is also often present in analyses of dictatorships. Karl Marx viewed the rise of Louis Bonaparte, as the dictator of France subsequent to the revolution of 1848, as the outcome of the mutual exhaustion of the bourgeoisie and the working class, and as the political expression of the peasantry and small proprietors.[8] Marx also noted the contradictory policy fluidity through which Louis Bonaparte kept projecting (and thereby legitimizing) himself as the defender of the middle classes against the poor, and vice versa, even as he advanced the rent-seeking interests of his ideology-free core support base - the 'lumpen proletariat'.[9] According to Ferguson (2006, p. 227), in inter-war Europe, "In some cases dictators may actually have been better for ethnic minorities than elected governments ... . (A)uthoritarian rulers could act as a check on violently intolerant fascist movements, most obviously in Romania, but also in Poland."

The purpose of this paper is to formally develop, micro-found and expand the intuitive ideas outlined above, through a suitably amended model of rent-seeking conflict. As already noted, despite both their intuitive plausibility, and their common occurrence in historical analyses of social conflicts in multi-ethnic empires and of dictatorships, these ideas do not

7 The idea was developed by the Marxist theoretician Antonio Gramsci in his analysis of 'Caesarism'. In his view, "Caesarism can be said to express a situation in which the forces in conflict balance each other … in such a way that a continuation of the conflict can only terminate in their reciprocal destruction. When … force A struggles against … force B, … it may happen that neither A nor B defeats the other … then a third force C intervenes from outside, subjugating what is left of both A and B. In Italy, after the death of Lorenzo il Magnifico this is precisely what occurred" Gramsci (1973, p.219). The third force C intervenes not only because of the mutual exhaustion of A and B, but also possibly because A or B invites C's intervention as a second best (or least unfavourable) solution. That was the case in Italy after the death of Lorenzo - the balance of power among the warring Italian states led to foreign intervention and occupation. See Fontana (2004) for a discussion.

8 See Carver (2004) for a discussion.

9. "Bonaparte … poses … as the representative of the middle class. … Bonaparte knows how to pose at the same time as the representative of the peasants and of the people in general, as a man who wants to make the lower classes happy …. But above all, Bonaparte knows how to pose as … the representative of the lumpen proletariat to which he himself, his entourage, his government, and his army belong, and whose main object is to benefit itself …This contradictory task of the man explains the contradictions of his government, the confused groping which tries now to win, now to humiliate, first one class and then another, …" (Marx 1852, chap. 7).

appear to have received much formal attention in the literature on rent-seeking. Our paper aims to fill this gap. In so doing, we contribute to the analytical understanding of the drivers of social peace in multi-ethnic societies. We do not claim that the ideas formally developed in this paper offer a complete and exclusive explanation for the historical episodes we seek to understand. But we do claim that our formal analysis helps clarify an important dimension of such historical reality.

Our benchmark model considers the following rent-seeking contest. Suppose three groups are contesting for control over state policy. Such control jointly confers two benefits. It provides institutionalized protection and patronage for the winner's preferred identitarian goods/activities, such as those involving religion, language, or traditional ethno-cultural practices. It also provides transfers of identity-neutral material resources or consumption goods– 'money'. Thus, as in models of electoral competition under multi-issue politics, the outcome has two dimensions – identity and redistribution.[10] Two contestants are 'ideologues': they have differing most-preferred locations on the identitarian dimension, and are worse off, in strictly convex fashion, the farther state policy diverges from their respective most-preferred location. Hence, ideologues cannot credibly pre-commit to any policy other than their most-preferred identitarian location, in case of victory. We identify the ideologues with antagonistic religious or ethno-linguistic groups constituting a population. The third contestant is purely 'extractive' or 'mercenary' – it is indifferent with regard to policy on the identity issues salient to the ideologues. Its sole reason for attempting to control state policy is the extraction of material rents, i.e., monetary transfers. It can therefore credibly pre-commit to any location on the identitarian continuum. We think of the third group as an imperial or colonial administrative-cum-settler elite distinct from both the ethnic groups constituting the subject population. The mercenary agent first chooses its identity location. All agents then simultaneously choose their contest efforts. Success probabilities (or prize shares) are given by the Tullock (1980) contest success function.

We show that, under reasonable parametric restrictions, the following hold in the unique subgame perfect (pure strategy) Nash equilibrium. The mercenary agent chooses an identity location that is equidistant from the ideologues – thus, in intuitive effect, offering the compromise that the ideologues cannot provide. Aggregate rent-seeking investment declines, and the mercenary agent is both more successful and better off, when the ideologues are more ideological (i.e., they put a higher weight on the identitarian good relative to the non-identitarian good). Rent-seeking investment by the mercenary agent may fall as well. Thus, it

10 See Roemer (1998) and Roemer *et al.* (2007) for such models, where competing political parties choose policy platforms over a material dimension (tax policy) and an identitarian dimension (religion, race or immigration).

is in the self-interest of imperial/colonial elites to maintain equidistance in identity-conflicts between ethnic factions of their subject population. Such elites may be able to ensure both greater social peace and greater rent extraction, with reduced repression, when identity cleavages are deeper within the subject population. When the ideologues put a sufficiently high relative weight on the identitarian good, a decline in the mercenary's opportunity cost of contest effort reduces conflict, measured by aggregate rent-seeking effort. Both ideologues are less successful in the contest, as in the standard case, but, strikingly, gain in welfare. Thus, a weakening of the political power of the imperial elite may increase conflict and make the subject population worse off, despite increasing the retention of material resources by the latter. Elimination of the mercenary from the contest increases conflict and makes the ideologues worse off. Hence, decolonization and the collapse of empires may lead to both greater conflict and reduced welfare in the successor states, despite increased retention of material resources by the constituent populations of such states. The model turns into a standard version in the limiting case where all agents are purely mercenary. Then, a fall in any contestant's opportunity cost of rent-seeking increases conflict and makes its opponents worse off; a rise in the number of contestants exacerbates conflict as well. This underscores the central pre-requisite for generating relative peace and welfare gains under colonial control by an alien administrative or settler elite – strong and antagonistic pre-existing identitarian ideologies among the subject population.

We further consider a variant of the model, where the ideologues are purely ideological (they derive no utility from the identity-neutral good), but the remaining agent puts a positive weight on consumption of the identitarian good. Thus, unlike the case in the benchmark model, the ideological locations of all three agents are exogenous in this variant. We show that the conclusions regarding the impact of a decline in the mercenary's opportunity cost of contest effort continue to hold. Conflict expands, and the pure ideologues are worse off despite being more successful, as the (imperfectly) mercenary agent becomes more identitarian. These results suggest that the more colonial elites are driven by identitarian ideologies (say, of religious proselytization or cultural-linguistic homogenization), the greater the level of social conflict, the less successful such elites are in extracting material resources from the subject population, and the more fragile their rule.

In our model, players are better off losing to one opponent than another. The identity of the winner matters to a loser, and it is best to lose to that opponent whose identitarian distance is the least. This constitutes the main departure of our analysis from standard treatments, where losers are indifferent to the identity of the winner. In highlighting identity and identitarian distance in contest contexts, our paper contributes to a diverse body of literature on the salience of these factors in economic behaviour, stemming from the seminal contributions of Akerlof (1997) and Akerlof and Kranton (2000). We also add to the literature on contests with inter-group consumption externalities (Bakshi and Dasgupta 2022, 2021; Dasgupta and Guha Neogi 2018).[11] Thirdly, we provide a contest-theoretic expansion to the literature on multi-issue politics – a literature that primarily focuses on multi-party electoral equilibria with endogenous and multi-dimensional policy platforms (e.g., Roemer1998; Roemer *et al.* 2007). Fourthly, our analysis offers one theoretical rationalization of the common empirical finding that greater ethnic polarization increases conflict (e.g., Montalvo and Reynal-Querol 2012) – our model explains why the elimination or weakening of one ethnic bloc may increase overall conflict in multi-ethnic societies. Lastly, our investigation here is distant kin to that in Dasgupta (2017), which discusses how an exogenous expansion of the part of the public sphere open to bilateral ethnic contestation may affect conflict outcomes. Our model, in contrast, endogenizes the part of the public sphere that is divided between the two ethnic (i.e., ideological) contestants.

Section 2 sets up the benchmark model. Section 3 identifies comparative static properties of the equilibrium. Section 4 compares the equilibrium in the benchmark model with that in a model with just the two ideologues. Section 5 discusses the equilibrium outcomes with two pure ideologues and an imperfectly mercenary agent. Section 6 explains how our theoretical results may be deployed to understand broad patterns of social conflict in India during the period of British colonial control. Section 7 concludes. Detailed proofs of propositions are relegated to an appendix.

## 2. Model

Consider three interest groups, modeled as individuals, $L$, $C$ and $R$. The three differ in some identity characteristic measured by non-negative real numbers. The identity characteristic of $g \in \{L, C, R\}$ is denoted $a_g$. The characteristics of $L$ and $R$ are constitutive of them, and therefore exogenous, whereas $C$ can choose the magnitude of the characteristic to define itself. The identity distance between $L$ and $C$ is $D_{LC} \equiv |a_L - a_C|$; analogously, $D_{CR} \equiv |a_C - a_R|$ and $D_{LR} \equiv |a_L - a_R| = 1$.Thus, the identity distance between $L$ and $R$ is normalized to unity. $R$ possesses the characteristic more than $L$: $[0 \leq a_L < a_R]$. $C$ can choose any identity characteristic in the interval $[a_L, a_R]$. Each agent $g \in \{L, C, R\}$ can engage in appropriation

[11] Our three-player framework with varying identitarian distance is similar to that in Bakshi and Dasgupta (2022). However, here (a) the location of one player is endogenous, and (b) the prize has two dimensions. Neither feature occurs in Bakshi and Dasgupta (2022) – they focus on how exogenous changes in social distance between agents affects conflict. Bakshi and Dasgupta (2021) and Dasgupta and Guha Neogi (2018) address only bilateral conflict; we focus on trilateral conflict here. Ihori (2001) and Buchholz *et al.* (2018) are contributions related to ours in their focus on inter-group consumption externalities, but they do not incorporate contests.

activities by investing effort at a marginal cost $w_g$. Appropriation activities, if successful, generate joint control of one unit of a good *I* and one unit of another good *M*.

Agents live for two periods and are expected utility maximizers. In period 1, *C* chooses $a_C$ from $[a_L, a_R]$. In period 2, agents contest each other for *I* and *M*, taking the identity vector $\langle a_L, a_C, a_R \rangle$ as given. The success probability (or, alternatively, the share of the prize) of $g \in \{L, C, R\}$ is given, in Tullock (1980) fashion:

$s_g = \frac{X_g}{X}$ if $X > 0$,

$= \frac{1}{3}$ otherwise; (1)

where $X_g \in \Re_+$ is the effort expended by $g$ on rent-seeking and $X$ denotes total such expenditure, ($X \equiv X_L + X_C + X_R$). $X$ will measure aggregate conflict. Recalling that $D_{LR} = 1$ by construction, preferences are given by the utility functions:

$$u_L = \left[\alpha\left(1 - {D_{LC}}^{\theta} i_C - i_R\right) + (1-\alpha)m_L\right] - w_L X_L; \quad (2)$$

$$u_C = m_C - w_C X_C; \quad (3)$$

$$u_R = \left[\alpha\left(1 - {D_{RC}}^{\theta} i_C - i_L\right) + (1-\alpha)m_R\right] - w_R X_R; \quad (4)$$

where $\alpha \in (0,1]$, $\theta > 1$, and, $i_g$ and $m_g$ denote, respectively, $g's$ consumption of *I* and *M*.

The good *I* is identity-relevant – its loss by any fixed-identity agent *L* or *R* to another agent generates a utility loss, the size of which depends, in increasing and strictly convex fashion, on the identity distance between the two. We shall term these agents ‘identity-ideologues’, or ‘ideologues’ for brevity. The good *M* is identity-neutral: its loss produces the same disutility to the loser, irrespective of the identity distance between the winner and the loser. The parameter $\alpha \in (0,1]$ captures the relative weight put on the acquisition of the identitarian good vis-à-vis the identity-neutral good by the ideologues $L$ and *R*: $\frac{1-\alpha}{\alpha}$ is the marginal rate of substitution between the latter and the former for them. A higher $\alpha$ implies a stronger relative commitment to identitarian ideology. Thus, intuitively, higher $\alpha$ may be interpreted as reflecting greater dominance of religious (or other ethno-identitarian) fanatics, relative to ‘pragmatists’ driven by material considerations, within a group, which we model as an individual agent. The identity good is irrelevant for the wellbeing of *C*– it puts zero weight on the consumption of that good, so that only the presence of the identity-neutral good *M*– ‘money’ - motivates it to join the rent-seeking contest. We shall term *C* ‘mercenary’.

${D_{ij}}^{\theta}$ captures the marginal welfare loss imposed on $i$ by *j*’s consumption of the identity good; $D_{ij} \in \{D_{LC}, D_{RC}, D_{LR}\}$.$\theta$ is its elasticity; $\theta > 1$.[12]All agents would turn mercenary if $\alpha = 0$.

12 This specific formulation is presented in Bakshi and Dasgupta (2022).

Using (2)-(4), expected utilities are:

$$v_L = \left(1 - {D_{LC}}^{\theta} s_C - s_R\right) + A(1 - s_C - s_R) - \left(\frac{w_L}{\alpha}\right) X_L; \tag{5}$$

$$v_C = (1 - s_L - s_R) - w_C X_C; \tag{6}$$

$$v_R = \left(1 - {D_{LR}}^{\theta} s_L - s_C\right) + A(1 - s_C - s_L) - \left(\frac{w_R}{\alpha}\right) X_R; \tag{7}$$

where $A \equiv \frac{1-\alpha}{\alpha}$. Note that $0 \leq A < \infty$, as $\alpha \in (0,1]$. Taking the identity location vector $\langle a_L, a_C, a_R \rangle$ determined in period 1 as given, all $g \in \{L, C, R\}$ simultaneously choose their contest efforts $X_g$ in period 2 to maximize their expected utilities given by (5)-(7), subject to the contest technology in (1). We characterize the subgame-perfect (pure strategy) Nash equilibrium in the next section.

## 3. Equilibrium

Given an identity vector $\langle a_L, a_C, a_R \rangle$, first consider the corresponding period 2 subgame. From (5)-(7),

$$\frac{dv_L}{dX_L} = \left({D_{LC}}^{\theta} + A\right)\left(\frac{X_C}{X^2}\right) + (1 + A)\left(\frac{X_R}{X^2}\right) - \left(\frac{w_L}{\alpha}\right); \tag{8}$$

$$\frac{dv_C}{dX_C} = \left(\frac{X_L}{X^2} + \frac{X_R}{X^2}\right) - w_C; \tag{9}$$

$$\frac{dv_R}{dX_R} = \left({D_{CR}}^{\theta} + A\right)\left(\frac{X_C}{X^2}\right) + (1 + A)\left(\frac{X_L}{X^2}\right) - \left(\frac{w_R}{\alpha}\right). \tag{10}$$

**Assumption 1.** (i) $w_C < (w_L + w_R)$; (ii) $w_C > w_j$ for $j = L, R$.

**Definition 1.** A Nash equilibrium in the period 2 subgame is *interior* if $[0 < X_L, X_C, X_R]$ in that equilibrium.

By *interior*, we define an equilibrium where all agents participate in (allocate positive resources to) rent-seeking. Assumption 1 ensures that any equilibrium in the period 2 subgame will be interior. It requires *C*'s marginal cost of appropriation effort to be higher than those of the ideologues, but less than the sum of the latter. Its justification is purely functional – it suffices to ensure that all agents will participate in rent-seeking.

**Proposition 1.** Let Assumption 1 hold. Then, for every $a_C \in [a_L, a_R]$, there exists a unique Nash equilibrium $\langle X_L^*, X_C^*, X_L^* \rangle$ in the period 2 subgame. This Nash equilibrium is interior and satisfies:

$$X_C^* = \left(\frac{w_R+w_L-w_C}{\alpha\left(D_{CR}{}^{\theta}+2A+D_{LC}{}^{\theta}\right)}\right) X^{*2}; \tag{11}$$

$$X_R^* = \left(w_L - \left(\frac{w_R+w_L-w_C}{\frac{D_{CR}{}^{\theta}+A}{D_{LC}{}^{\theta}+A}+1}\right)\right) X^{*2}; \tag{12}$$

$$X_L^* = \left(w_R - \left(\frac{w_R+w_L-w_C}{\frac{D_{LC}{}^{\theta}+A}{D_{CR}{}^{\theta}+A}+1}\right)\right) X^{*2}; \tag{13}$$

where $X_L^* + X_C^* + X_R^* = X^*$.

**Proof.** See the appendix.

Proposition 1 directly yields the following.

**Corollary 1.** Let Assumption 1 hold. Then, for every $a_C \in [a_L, a_R]$, the total conflict effort allocation in the period 2 subgame satisfies:

$$X^* = \left(\frac{D_{CR}{}^{\theta}+D_{LC}{}^{\theta}+2A}{(w_R+w_L)\left(\frac{1}{\alpha}\right)+w_C(A+D_{CR}{}^{\theta}+D_{LC}{}^{\theta}-1)}\right) = \left[\frac{(w_R+w_L)-w_C}{\alpha\left(D_{CR}{}^{\theta}+2A+D_{LC}{}^{\theta}\right)} + w_C\right]^{-1}. \tag{14}$$

**Corollary 2.** Let Assumption 1 hold. Then, the unique subgame-perfect Nash equilibrium satisfies $a_C = a_L + \frac{D_{LR}}{2}$.

**Proof.** See the appendix.

By Corollary 2 and (14), recalling that $\theta > 1$, and that $[(w_R + w_L) - w_C > 0]$ by Assumption 1, aggregate conflict in the unique subgame perfect Nash equilibrium satisfies:

$$X^* = \min_{a_C} \left[\frac{(w_R+w_L)-w_C}{\alpha\left(D_{CR}{}^{\theta}+2A+D_{LC}{}^{\theta}\right)} + w_C\right]^{-1} = \left(\frac{1}{\left(\frac{(w_R+w_L)-w_C}{2-2\alpha\left(1-2^{-\theta}\right)}\right)+w_C}\right). \tag{15}$$

By Corollary 2, *C* will find it optimal to fix its identitarian location exactly between the two identity ideologues.[13] It will thereby minimize overall conflict (equation (15)). By moving identity-wise closer to any ideologue, say *L*, from the middle, *C* reduces *L*'s loss in case of a *C* victory. This incentivizes *L* to invest less in the contest, which raises *C*'s success probability (or, alternatively, share). Conversely, a move towards *L* by *C* induces *R* to invest more in the contest, which reduces *C*'s success. Due to strict convexity of the identitarian loss function, the net effect on *C*'s success probability, and thus its pay-off, is negative. Hence it is optimal for

13 *C* may therefore be permitted to locate at any point on $\Re_{++}$ instead of $[a_L, a_R]$.

$C$ to locate at the identity-ideological center – intuitively, assume a neutral position in the identity-clash between the two identity-ideologues. Interestingly, such location is optimal regardless of conflict costs, given Assumption 1.[14]

Using (1), (11), Corollary 2 and (15), we have the success probability (or share) of the mercenary agent in the subgame perfect Nash equilibrium:

$$s_C^* = 1 - \left( \frac{1}{\left( \frac{\left(\frac{w_R + w_L}{w_C}\right) - 1}{2 - 2\alpha\left(1 - 2^{-\theta}\right)} \right) + 1} \right). \tag{16}$$

Using (1), (6) and (15), the expected pay-off of $C$in the subgame perfect Nash equilibriumis:

$$v_C{}^* = s_C^{*2}. \tag{17}$$

Equations (15)-(17) yield the following.

**Corollary 3.** Let Assumption 1 hold. Then $s_C^*$ is increasing in both $\alpha$ and $\theta$, with $\lim_{\alpha \to 1, \theta \to \infty} s_C^* = 1$. Furthermore, $X^*$ is decreasing in both $\alpha$ and $\theta$ with $\lim_{\alpha \to 1, \theta \to \infty} X^* = 0$; and $v_C{}^*$ is increasing in both $\alpha$ and $\theta$.

By Assumption 1(ii), the mercenary agent $C$ has a conflict cost disadvantage. Despite this, however, it is possible for $C$ to be arbitrarily more successful in rent-seeking than the ideological agents. $C$ is more successful when the ideologues are more ideological ($\alpha$ is higher) and/or the identitarian loss function is more elastic ($\theta$ is higher). $C$'s success probability, or share of the prize, is arbitrarily close to 1 when the identity-ideology parameters $\alpha$ and $\theta$ are sufficiently high. Second, aggregate conflict falls as the ideological parameters $\alpha$ and $\theta$ increase – it falls to arbitrarily low levels when the two ideological parameters are sufficiently high. Thus, not only does a greater role for identity-ideology in the decisions of $L$ and $R$ reduce rent-seeking conflict, a sufficiently high role for such ideology, as captured by the twin parameters $\alpha$ and $\theta$, can reduce conflict to negligible levels. Lastly, it is better for the mercenary agent $C$ to face more ideological rivals – $C$ is unambiguously better off as the ideologues' identity-ideological parameters $\alpha$ and $\theta$ increase. Corollary 3 suggests the preconditions for

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[14] If $0 < \theta < 1$, there exist exactly two subgame-perfect Nash equilibria. These involve $C$ locating at either identitarian end, i.e., at $a_L$ or $a_R$. If $\theta = 1$, then every location by $C$ over $[a_L, a_R]$ constitutes a subgame-perfect Nash equilibrium. Thus, $0 < \theta < 1$ implies a situation where the imperial center's identarian policies are those most preferred by one of its ethnic subject groups – the empire then effectively becomes an ethno-state. As discussed in section 1 and in section 6 below, such an outcome seems to contradict much of the historical record with regard to the policies of multi-ethnic empires. Thus, our parametric restriction $\theta > 1$ is both necessary and sufficient to rule out the possibility of an 'ethno-state equilibrium', and it is justified by much historical evidence.

'imperial peace' despite 'imperial drain' – a mercenary, extractive authority ruling over a subject population deeply and antagonistically cleaved along identity lines, for whom the freedom to engage in religious or cultural-linguistic identity practices is of paramount relative salience. By placing itself at the centre, the mercenary, in effect, achieves a compromise within the identitarian dimension, thereby incentivizing the reduction of conflict effort from ideologues, which serves to reduce total conflict. The more ideological the ideologues (i.e., the higher the ideological parameters $\alpha$ and $\theta$), the stronger this effect, hence the lower total conflict is.

The next set of results identify the consequences of a marginal decline in the mercenary agent's cost of conflict effort.

**Proposition 2.** Let $\left[\alpha > \frac{1}{2(1-2^{-\theta})}\right]$. Suppose Assumption 1 holds. Then, using the superscript $*$ to denote the subgame-perfect Nash equilibrium level of the variables, $\frac{dX^*}{dw_C}, \frac{ds_R^*}{dw_C}, \frac{ds_L^*}{dw_C} > 0$. However, there exists $\varepsilon > 0$ such that $\frac{dv_L{}^*}{dw_C}, \frac{dv_R{}^*}{dw_C} < 0$ when $w_R \in (w_L - \varepsilon, w_L + \varepsilon)$.

**Proof.** See the appendix.

By Proposition 2, lower cost of contesting for the mercenary agent reduces conflict, instead of increasing it, if the ideologues are sufficiently ideological, i.e., if they put a sufficiently high weight on the identitarian prize relative to the identity-neutral prize. Such a decline must also increase the pay-offs to the ideologues, despite their success probabilities (or shares) falling, provided their costs of conflict effort are sufficiently similar. The threshold value of $\alpha$ for this to hold, $\frac{1}{2(1-2^{-\theta})}$, is always less than 1 (as $\theta > 1$); it declines and approaches $\frac{1}{2}$ as $\theta$ increases. Thus, a fall in the conflict cost of the mercenary agent is more likely to be conflict depressing, in the sense of having that effect for a larger interval of values for $\alpha$, the more elastic the identitarian loss function. In contrast, as can be checked from (15), conflict increases as either ideologue's cost of conflict effort falls, and the mercenary agent is worse off - as in standard models. Notice that, by (17), Proposition 2 implies $\frac{dv_C{}^*}{dw_C} < 0$: the mercenary agent is always worse off with a higher cost of conflict effort, as might be expected. Proposition 2 provides a micro-founded rationalization of the internal ethnic violence that is often associated with the weakening of central power in multi-ethnic empires, typically due to defeat in external wars – recall the discussion in section 1, especially footnote 2.

The mechanism driving Corollary 3 and Proposition 2 is the following. A rise in the identity parameter $\alpha$ (or $\theta$) raises the ideologues' utility in case of own loss, inducing them to invest less in ensuring their own victory. Aggregate conflict therefore falls (Corollary 3), and $C$'s success probability (or prize share) rises. Any decline in $w_C$ directly induces *C* to invest more in contestation, increasing its success. Part of this extra success comes from reducing *L*'s win probability, which increases the pay-off to *R* in case of own loss, reducing the latter's incentive to invest in rent-seeking. An analogous consideration applies to *L*. The net impact on conflict is negative. When the two ideologues are roughly similar in their conflict costs, their probability losses to *C* are roughly similar, and their identity-ideological gains from such losses to *C* (instead of to each other) are positive. Thus, the ideologues lose in the material sphere and gain in the identitarian sphere when *C* is more successful. The net impact, therefore, on the ideologues' expected utility, of a fall in $w_C$, is positive when the relative weight put by them on the ideological dimension is sufficiently high (Proposition 2).

**Remark 1.** Suppose Assumption 1 holds. Then $\frac{dX^*}{dw_C} < 0$ (so that a decline in $w_C$ will expand conflict) if $\alpha < \frac{1}{2(1-2^{-\theta})}$. Given $[w_R = w_L]$, $\frac{ds_R^*}{dw_C}, \frac{ds_L^*}{dw_C} > 0$; hence a decline in $w_C$ will reduce the ideologues' success probabilities (or shares) regardless of $\alpha$. Furthermore, given $w_R = w_L$, there exists $\bar{\alpha} \in (0, \frac{1}{2(1-2^{-\theta})})$ with the following property: $\frac{d{v_L}^*}{dw_C}, \frac{d{v_R}^*}{dw_C} > 0$ (so that a decline in $w_C$ will make both ideologues worse off) when $\alpha < \bar{\alpha}$.

**Proof:** See the appendix.

Remark 1 implies that our model behaves in the standard manner with regard to the conflict cost of *C* when the ideologues' identity parameter $\alpha$ is sufficiently low. Intuitively, when $\alpha < \bar{\alpha}$, the ideologues are close to being mercenaries themselves. The benefit which the mercenary brings in when $\alpha$ is high is lost in this case, which is close to a standard contest between three players, where the increase in efficiency of one reduces the payoffs of others.

It is easy to check that, by Proposition 1, Corollary 2 and Corollary 3, equilibrium conflict investment by the ideologues, $X_R^*$ and $X_L^*$, are both monotonically decreasing in $\alpha$. Thus, if the ideologues become more ideological, they end up offering weaker *resistance* to *C*. What happens to *C*'s conflict investment, which may be interpreted as the degree of *repression* faced by the ideologues? Our next proposition answers this question.

**Proposition 3.** Let Assumption 1 hold. Then there exists $\tilde{\alpha} \in (0,1]$ such that $\frac{dX_C^*}{d\alpha} < 0$ (resp. $>$ 0) if $\alpha > \tilde{\alpha}$ (resp. $<\tilde{\alpha}$); $\tilde{\alpha} = 1$ if $2^{1-\theta} \geq \left(\frac{(w_R+w_L)}{w_C} - 1\right)$ and $\tilde{\alpha} \in (0,1]$ otherwise. If $2^{1-\theta} < \left(\frac{(w_R+w_L)}{w_C} - 1\right)$, then $\frac{d\tilde{\alpha}}{d\theta} < 0$.

**Proof.** See the appendix.

By Assumption 1, $\left[0 < \frac{(w_R+w_L)}{w_C} - 1 < 1\right]$. By Proposition 3, when $\theta$ is close to 1, so that $2^{1-\theta} \geq \left(\frac{(w_R+w_L)}{w_C} - 1\right)$, *C*'s conflict investment is increasing in $\alpha$, peaking when the ideologues are perfectly ideological ($\alpha = 1$). Thus, *C* becomes more repressive vis-à-vis the ideologues as the latter become more ideological – repression by *C* is minimized in the limiting case where all contestants are fully mercenary ($\alpha = 0$). However, a large enough value of the loss elasticity, $\theta$, implies $2^{1-\theta} < \left(\frac{(w_R+w_L)}{w_C} - 1\right)$. *C*'s conflict investment then behaves in inverted-U fashion – it initially rises as $\alpha$ rises, peaks at some positive value of $\alpha$ less than 1, and subsequently falls. Thus, regardless of $\theta$, *C* represses the ideologues more if the latter's identitarian commitment rises marginally from a low initial level. However, further strengthening of such commitment from an already high level may reduce repression. The higher the value of $\theta$, the more likely that a rise in $\alpha$ will reduce repression, in that the larger the parametric range $(\tilde{\alpha}, 1]$ over which repression is falling in $\alpha$.[15]

**4. Contests with and without non-ideological combatants**

We now show that the insertion of a mercenary agent into an ideologically bipartisan contest will reduce conflict, and possibly even make the ideologues better off, when the latter's privileging of identitarian ideology ($\alpha$) is sufficiently high.

Consider the contest without *C*. Then the equilibrium conditions are:

$$(1 + A)\left(\frac{X_R}{X^2}\right) = \frac{w_L}{\alpha};$$

$$(1 + A)\left(\frac{X_L}{X^2}\right) = \frac{w_R}{\alpha}.$$

Hence, in equilibrium,

$$\check{s}_R = \left(\frac{X_R}{X}\right) = \frac{w_L}{w_L+w_R}, \tag{18}$$

$$\check{s}_L = \left(\frac{X_L}{X}\right) = \frac{w_R}{w_L+w_R}; \tag{19}$$

Implying that aggregate conflict satisfies:

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[15] When $\theta \in (0,1]$, recalling (14), aggregate conflict is given by $X^* = \left[\frac{(w_R+w_L)-w_C}{(2-\alpha)} + w_C\right]^{-1} = \left[\frac{2-\alpha}{(w_R+w_L)+(1-\alpha)w_C}\right]$; while $s_C^* = 1 - \left[\frac{\frac{(w_R+w_L)}{w_C}-1}{(2-\alpha)} + 1\right]^{-1}$. Then, given Assumption 1, aggregate conflict falls and *C*'s success probability increases as $\alpha$ increases, as does *C*'s pay-off, as in Corollary 3. However, aggregate conflict turns non-increasing in $w_C$. Nor can a rise in $w_C$ necessarily make both ideologues worse off even if $w_L = w_R$. Thus, Proposition 2 breaks down when $\theta < 1$. Proposition 3, too, breaks down: when $\theta < 1, X_C^*$ first falls and then rises when $\alpha$ rises if $\left[\frac{(w_R+w_L)}{w_C} - 1 > 2^{-\theta}\right]$; it is monotonically decreasing in $\alpha$ otherwise.

$$\check{X} = \left(\frac{1}{w_L + w_R}\right). \tag{20}$$

Using (5) and (7), equilibrium pay-offs are:

$$\breve{v}_L = \left(\frac{w_R}{w_L + w_R}\right) - \left(\frac{w_R w_L}{w_L + w_R}\right)\check{X} = w_R \check{X}(1 - w_L \check{X}); \tag{21}$$

$$\breve{v}_R = \left(\frac{w_L}{w_L + w_R}\right) - \left(\frac{w_L w_R}{w_L + w_R}\right)\check{X} = w_L \check{X}(1 - w_R \check{X}). \tag{22}$$

Using the superscript $*$ to denote the corresponding equilibrium variables under tri-partite conflict in section 3 above, we then have the following.

**Proposition 4.** Let Assumption 1 hold. Then (i) ${s_L}^* < \check{s}_L$, ${s_R}^* < \check{s}_R$; (ii) there exists $\ddot{\alpha} \in (0,1)$ such that: $X^* < \check{X}$ (resp. $> \check{X}$) if $\alpha > \ddot{\alpha}$ (resp. $< \ddot{\alpha}$); and (iii) when $w_L = w_R$, there exist $\hat{\alpha}, \tilde{\alpha} \in (0,1), \hat{\alpha} < \tilde{\alpha}$, such that: $[{v_L}^* > \check{v}_L, {v_R}^* > \check{v}_R$ if $\alpha > \tilde{\alpha}]$ and $[{v_L}^* < \check{v}_L, {v_R}^* < \check{v}_R$ if $\alpha < \hat{\alpha}]$.
**Proof.** See the appendix.

By Proposition 4, conflict is less with a mercenary combatant, than without, when the ideologues are highly ideological ($\alpha$ exceeds a threshold value). Both ideologues must be better off in the first case if they have identical conflict costs. Since all relevant functions are continuous, the same outcome will also obtain when ideological commitment is sufficiently high and the ideologues' conflict costs are sufficiently similar. The converse, standard, conclusions hold when $\alpha$ is sufficiently low. Proposition 4 provides a theoretical rationalization of the ease with which European powers often managed to colonize ethnically divided identity-driven societies such as India.[16]

## 5. Variant: a partly ideological centrist

Now suppose *L* and *R* are perfectly ideological ($\alpha = 1$), but, unlike the case in our benchmark model, *C* has a preferred identitarian location, and puts a positive weight on identitarian ideology. What happens, then, to conflict and other variables of interest, when *C*'s weight on the ideological dimension, or its identity distance from the other contestants, increases? We proceed to analyze this variant of our benchmark model. Suppose that an identity location is now given by a point in non-negative real space with two or more dimensions, and that the distance between two such locations is given by the Euclidean distance function. To reduce the

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16 If $\theta \in (0,1]$, then equilibrium conflict is given by $X^* = \left[\frac{(w_R+w_L)-w_C}{(2-\alpha)} + w_C\right]^{-1} = \left[\frac{2-\alpha}{(w_R+w_L)+(1-\alpha)w_C}\right]$; aggregate conflict falls as $\alpha$ rises (footnote 15). Hence, in this case, $X^* \geq \check{X}$; the inequality holding strictly when $\alpha < 1$. Thus, when $\theta \in (0,1]$, the insertion of a mercenary agent into a bipartite contest between ideologues cannot reduce conflict, so that Proposition 4 no longer holds.

notational burden, we shall assume that $w_L = w_R = w$. Furthermore, for immediate comparison with our benchmark model, where *C* must locate in the ideological middle in equilibrium, we assume now that *C*'s preferred ideological location continues to be equidistant from both *L* and *R*, i.e., $\frac{1}{2} \leq D_{LC} = D_{CR} = \delta < \left(\frac{1}{2}\right)^{\frac{1}{\theta}}$. The restriction that $\delta < \left(\frac{1}{2}\right)^{\frac{1}{\theta}}$ implies $\delta < 1$, so that the identity-ideological distance between *C* and *L* (or *R*) is less than that between *L* and *R*, as in our benchmark model. Then, recalling (2)-(4), expected utilities are given by:

$$v_L = (1 - \delta^\theta s_C - s_R) - wX_L;$$

$$v_R = (1 - \delta^\theta s_C - s_L) - wX_R.$$

$$v_C = \alpha_C\left(1 - (s_L + s_R)\delta^\theta\right) + (1 - \alpha_C)(1 - s_L - s_R) - w_C X_C;$$

where $\alpha_C \in [0,1]$. Assume$\left(w > \frac{w_C}{2\delta^\theta}\right)$. It is then easy to check that a Nash equilibrium must exist and be unique; furthermore, the unique Nash equilibrium must be interior. In the Nash equilibrium,

$$\frac{1}{X^*} = \delta^{-\theta} w + \left(\frac{w_C}{2}\right)\left(\frac{2-\delta^{-\theta}}{\alpha_C\delta^\theta + (1-\alpha_C)}\right) = \frac{\delta^{-\theta}(2w(1-\alpha_C) - w_C) + 2w_C + 2\alpha_C w}{2(\alpha_C\delta^\theta + (1-\alpha_C))}. \quad (23)$$

Note that, in the limiting case $\alpha_C = 0, \delta = \frac{1}{2}$, the case of the benchmark model in the previous section, this reduces to:

$$\frac{1}{X^*} = 2^\theta w - (2^{\theta-1} - 1)w_C. \quad (24)$$

As is to be expected, (24) is equivalent to the expression (15) when $(w_R = w_L = w)$ and $\alpha = 1$. Furthermore, in the Nash equilibrium,

$$s_L{}^* = s_R{}^* = \left(\frac{w_C X^*}{2}\right)\left(\frac{1}{\alpha_C\delta^\theta + (1-\alpha_C)}\right); \quad (25)$$

$$v_L{}^* = v_R{}^* = 1 - \delta^\theta - \left(1 - 2\delta^\theta + wX^*\right)s_L{}^*. \quad (26)$$

Using (23), (25) and (26), we have the following.

**Proposition 5.** Suppose $w > \left(\frac{w_C}{2\delta^\theta}\right)$**.** Then:

(i) there exists $\varepsilon \in (0,1)$ such that, for all $\alpha_C \in (0, \varepsilon)$, $\frac{dX^*}{d\delta} > 0$;

and

(ii) for all $j \in \{L, R\}$:

(a) $[\frac{dX^*}{dw_C}, \frac{ds_j{}^*}{dw_C} > 0]$ and $[\frac{dv_j{}^*}{dw_C} < 0]$;

(b) $[\frac{dX^*}{d\alpha_C}, \frac{ds_j{}^*}{d\alpha_C} > 0]$ and $[\frac{dv_j{}^*}{d\alpha_C} < 0]$.

**Proof.** See the appendix.

Proposition 5(i) shows that, when $C$ is relatively mercenary, a rise in its identitarian distance from *L* and *R* increases conflict. Part (iia) implies that the findings in Proposition 2 continue to hold in the somewhat different scenario considered in this section. By Proposition 5(iib) aggregate conflict rises, and *C*'s success probability falls, as *C* becomes more ideological. Recall that the exact opposite outcomes happen when *L* and *R* become more ideological in our benchmark model (Corollary 3). $L$ and $R$ are worse off if *C* becomes more ideological (while *C* is better off if *L* and *R* become more ideological in our benchmark model – recall Corollary 3).

**Remark 2.** By Proposition 5(ii), $\frac{dX_L{}^*}{d\alpha_C}, \frac{dX_R{}^*}{d\alpha_C} > 0$, so that conflict expenditures rise for both *L* and *R* as *C* becomes more ideological. Thus, *C* faces more *resistance* as it becomes more ideological. This increases aggregate conflict and reduces *C*'s success probability (Proposition 5(ii)). The effect on repression faced by *L* and *R*, i.e., on *C*'s equilibrium conflict investment, is ambiguous.

Proposition 5 provides analytical confirmation of the expectation that the domination of imperial bureaucratic/settler elites would be more strenuously challenged if they sought to impose their religious or ethno-cultural norms and belief systems on subject populations. The more alien such norms or belief systems appear to their subjects, the greater the opposition the rulers would face.

## 6. Illustration: Pax Brittanica in India

We now discuss how the main hypotheses generated by our theoretical exercise help rationalize, in a broad-brush manner, key elements of Indian history during the era of British colonization.

Ferguson (2004) notes that, between 1858 and 1947 there were typically fewer than 1,000 members of the Indian Civil Service ruling over a population which, by 1947, exceeded 400 million. The British population in India amounted to at most 0.05 per cent of the total. It follows that British rule in India would not have lasted so long without a great deal of acquiescence, indeed collaboration, on the part of Indians. Such acquiescence happened despite massive extraction, or drain, of material resources from India (Patnaik 2017), recurrent famines (Davis 2001), large excess mortality (Sullivan and Hickel 2023) and insignificant rise in per capita real income (Maddison 2007). How, then, did the British manufacture consent? Did they adopt a policy of religious neutrality as a key strategy for dampening opposition and conferring legitimacy on colonial rule? Our theoretical analysis leads one to suspect that this might be the case. The historical record is indeed consistent with this expectation.[17]

Ferguson (2004, chap. 3) discusses how, until the first decades of the 19th century, the British in India did not evince interest in either Anglicizing or Christianizing India, for fear of producing a backlash that might endanger their economic interests. The British East India Company practised religious non-interference, regarding trade as its primary concern. Company chaplains were explicitly banned from preaching to Indians. The company also used its power to restrict the entry of missionaries into India. Robert Dundas, the President of the Board of Control in India, explained to Lord Minto, the Governor-General, in 1808: "It is desirable that the knowledge of Christianity should be imparted to the native, but the means to be used for that end shall only be such as shall be free from any political danger or alarm ... Our paramount power imposes upon us the necessity to protect the native inhabitants in the free and undisturbed possession of their religious opinions" (Ferguson 2004, p. 2372). In choosing to adopt a neutral religious policy, the company can be thought of as acting as the perfectly mercenary agent in our benchmark model, facing two opponents, viz., Indian Hindu and Muslim communities, both of whom were greatly motivated by their religio-cultural (i.e., ideological) interests (high $\alpha$). During this period, the British stabilized their control over eastern India, which they had captured in 1757, and progressively extended their rule over other parts of the country. Only rarely did they face effective military pushback from local Indian states or communities. The British extended their hegemony over India with relatively little repression and relatively little opposition – even as they extracted massive amounts of material resources from India. In light of Corollary 2, Corollary 3 and Proposition 3, our benchmark model suggests that both phenomena may be rationalized or explained, at least in part, by the explicit British strategy of maintaining religious-cultural neutrality in a highly religious, deeply conservative, and inherently divided society.

In 1813, the company's charter came up for renewal, and British evangelicals seized their chance to end its control over missionary activity in India. A new East India Act not only opened the door to missionaries, but also provided for the appointment of a bishop and three archdeacons for India. Over the next decades, the British sought actively to change many traditional Indian practices, "which seemed to – and in many ways actually did – add up to a plot to Christianize India" (Ferguson 2004, p. 2549). In terms of our model, the colonial state

17 The British colonial administration followed similar policies of religious neutrality in Burma, Malaya and Nigeria, and sought to minimize the salience of religion. They crushed the Buddhist monarchy in Burma, limited the power of Islamic courts and schools in Malaya, and expunged religion by privileging ethnic categories derived from ancestral cities in Yorubaland in Nigeria. See Verghese (2016) for a discussion.

had now come to behave as the partly ideological centrist entity in section 5, whose preferred religious-ideological location increasingly diverged from those of its subject communities. Proposition 5 would then lead us to expect a rise in political conflict and greater opposition to British rule. The British, indeed, faced a massive uprising in northern India against their rule in 1857. Religious grievances were central to this uprising - In Delhi the rebels complained: ‘The English tried to make Christians of us’ (Ferguson, p. 2549).

Afterwards, many British administrators recognized that they had interfered excessively in the religious customs of India. In her 1858 proclamation, which transferred India from the East India Company to the Crown, Queen Victoria therefore noted, “We disclaim alike the right and the desire to impose our convictions on our subjects. We declare it to be our royal will and pleasure that none be in anywise favored, none molested or disquieted, by reason of their religious faith or worship of all of our subjects, on pain of our highest displeasure” (Verghese 2018, p. 34). The British reverted to being the perfectly mercenary entity in our model in principle, and, indeed, much of the time in practice.

Kooiman et al. (2002, p. 56) illustrate the overall effect of religious neutrality by looking at Madras Presidency. The British government in Madras had arrived at a policy of not involving itself in religious matters and of upholding a stance of imperial arbiter in secular matters. There was little reason for any local community to see the ruler-subject relationship in a proprietorial manner. The British were convinced that this neutral bureaucracy was a major factor in the discouragement of communal strife. This pattern was replicated all over British India - in the interests of promoting secularism, the British embraced a policy of religious neutrality, of “balance and rule” (Hardy 1972).

About a third of India continued to be ruled by Indian princes under British colonialism. “The native states were essentially theocracies—often explicitly Hindu or Muslim kingdoms—and princely rulers promoted the salience of their religion above all other categories” (Verghese 2016, p. 33). Verghese (2016, chap. 2) compares two neighbouring regions– Jaipur and Ajmer. Jaipur was a Hindu princely state; Ajmer was ruled directly by the British from 1818 till 1947. Jaipur was beset by Hindu-Muslim communal conflict for much of its pre-independence history. This religious violence began with the discriminatory policies of Jaipur State toward its minority Muslim community. In contrast, British administrators in Ajmer implemented a policy of religious neutrality, which had the effect of protecting the Muslim minority. This policy eliminated religion as the primary mode of ethnic classification in the region. British officers were concerned foremost about maintaining a sense of equality between Hindus and Muslims under the law. In consequence, Ajmer remained largely free of religious conflict during British rule. Verghese (2016, chap. 3) documents analogous differences between British-ruled Malabar and the neighbouring Hindu princely state of Travancore. He argues that these differences formed a general pattern. Muslims in the Indian princely states often held as their standard for treatment the way their counterparts lived in British India, and complained against their treatment in the Hindu-ruled princely states according to such standard (Verghese 2016, p. 67).[18]

Now recall that, in our benchmark model, if the ideologues become less ideological, they end up offering stronger resistance to the mercenary agent, thereby reducing the latter's success probability. The policy of ideological equidistance (or neutrality) adopted by the mercenary agent might involve the development of public institutions that serve to make ideologues less ideological. Verghese (2016) argues that the British emphasis on secular public institutions in India served to reduce Hindu-Muslim divisions over time. Our benchmark model then suggests that the very policy of religious neutrality and secular education that initially served to stabilize British control in India, may have, over time, by increasing the relative salience of economic issues in public life, served to delegitimize such control. Seen in this light, the mass nationalist movements after WW I appear as a possible long-term, unintended consequence of British religious neutrality and attempts at secularization. Nonetheless, religious divides remained deep, leading to the outbreak of mass Hindu-Muslim violence in 1946, as British power weakened after WW II – an outcome predicted by our Proposition 2. As one might expect in light of Proposition 4, Hindu-Muslim violence and ethnic cleansing peaked in 1947, as the British withdrew and the country was partitioned along ethnic lines. East Pakistan continued to experience periodic outbreaks of mass violence against its large Hindu minority till its transformation into Bangladesh in 1971. Likewise, multiple episodes of large-scale Hindu-Muslim violence have taken place in independent India, and religious tensions remain high.

## 7. Conclusion

This paper has shown that, when ideologically-motivated agents contest monetarily-motivated ones over a joint prize that has both ideological and monetary components, some key conclusions of the standard literature on rent-seeking contests may get reversed. A decline in the monetarily-motivated agent's cost of contest effort may reduce conflict and make its opponents better off, despite reducing their probability of winning (or their share of) the prize. Elimination of the monetarily-motivated agent from the contest may increase conflict and

18 Patronage of religious institutions – religion-specific public/club goods - by princely rulers brought the interests of the rulers into alignment with those of their co-religionist subjects. Hence, conflicts in the princely states may be visualized as bipartite contests, in contrast to our tripartite conceptualization of conflicts in parts of India under direct British rule. Voluntary provision of group-specific public goods by group members may restrain internal conflict, equalize welfare and engender solidarity within a group. See Dasgupta and Kanbur (2005, 2007, 2011), Dasgupta and Guha Neogi (2018) and Jelnov and Klunover (2020) for formal investigation.

reduce the wellbeing of the remaining contestants. In the late 19th and early 20th centuries, the weakening and eventual collapse of multi-ethnic empires such as the Ottoman, Austro-Hungarian and Tsarist ones, largely due to defeat in external wars, was associated with a sharp rise in ethnic conflict within their territories. Similarly, the weakening of the British empire immediately after WW II and its withdrawal from India in 1947 overlapped with extensive Hindu-Muslim violence. The theoretical analysis in this paper helps rationalize these historical episodes. It provides one possible way of understanding ‘imperial peace’ - why multi-ethnic empires often enjoyed long periods of relative peace and weak opposition from subject populations, despite heavy resource extraction and relatively little repression. It also explains why decolonization is commonly associated with a rise in ethnic conflict within the successor states. More generally, our analysis helps identify key drivers of social conflict in multi-ethnic societies.

Throughout our analysis, we have identified the monetarily-motivated agent in our model with an extractive imperial bureaucracy or a settler-colonial elite imposed on a subject population. In many contexts, however, this agent may be usefully identified with an ethnic community that acts as a buffer between two other mutually antagonistic ethnic groups. For example, it is sometimes argued that, in the former Yugoslavia, the Slovenes acted as a buffer between the Serbs and the Croats. In late-colonial British India, many lower caste Hindu politicians tried to position themselves between the warring Muslim League and the upper caste Hindu-dominated Indian National Congress, thereby wresting concessions for their client communities. One of them, Jogendra Nath Mondal, even became the first Minister of Law and Labor in Pakistan. Non-ethnic or non-denominational political movements, such as Tito’s Communists or the post-Independence Indian National Congress under Jawaharlal Nehru’s leadership, may have served a similar buffer function. An application of a suitably expanded version of our benchmark model to the analysis of social conflict in such contexts may yield useful insights.

Lastly, we have abstracted from issues of internal differentiation and coordination within interest groups, by modeling them as individuals. Explicit incorporation of these issues would constitute a natural extension of paper.

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**Appendix**

We shall prove Proposition 1 via the following lemma.

**Lemma 1.** Given Assumption 1, in any Nash equilibrium in a period 2 subgame, $[0 < X_C, X_R, X_L]$.

**Proof of Lemma 1.**

Let Assumption 1 hold.

First suppose a Nash equilibrium exists in the period 2 subgame where $X_C = 0$, $X_L, X_R > 0$. Then, using (8)-(10), the equilibrium conditions are:

$$\frac{dv_L}{dX_L} = (1 + A)\left(\frac{X_R}{X^2}\right) - \left(\frac{w_L}{\alpha}\right) = 0;$$

$$\frac{dv_C}{dX_C} = \left(\frac{X_L}{X^2} + \frac{X_R}{X^2}\right) - w_C \leq 0;$$

$$\frac{dv_R}{dX_R} = (1 + A)\left(\frac{X_L}{X^2}\right) - \left(\frac{w_R}{\alpha}\right) = 0.$$

Combining,

$$w_C(1 + A) - \left(\frac{w_L + w_R}{\alpha}\right) \geq 0,$$

which (since $A = \frac{1-\alpha}{\alpha}$) implies: $1 \geq \left(\frac{w_L + w_R}{w_C}\right)$, which violates Assumption 1(i). Hence $X_C = 0$, $X_L, X_R > 0$ cannot be an equilibrium.

Now suppose $X_L = 0$, $X_C, X_R > 0$. Then, using (8)-(10), the equilibrium conditions are:

$$\frac{dv_L}{dX_L} = \left({D_{LC}}^{\theta} + A\right)\left(\frac{X_C}{X^2}\right) + (1 + A)\left(\frac{X_R}{X^2}\right) - \left(\frac{w_L}{\alpha}\right) \leq 0;$$

$$\frac{dv_C}{dX_C} = \left(\frac{X_R}{X^2}\right) - w_C = 0;$$

$$\frac{dv_R}{dX_R} = \left({D_{CR}}^{\theta} + A\right)\left(\frac{X_C}{X^2}\right) - \left(\frac{w_R}{\alpha}\right) = 0.$$

Combining, $\left[\left(\frac{({D_{LC}}^{\theta} + A)w_R}{{D_{CR}}^{\theta} + A}\right) + (1 + A)\alpha w_C - w_L \leq 0\right]$. Now, since $0 \leq {D_{LC}}^{\theta} \leq 1$, and $0 \leq {D_{CR}}^{\theta} \leq 1$, $\left(\frac{A}{1+A}\right) \leq \left(\frac{{D_{LC}}^{\theta} + A}{{D_{CR}}^{\theta} + A}\right)$, so that:

$$[(1 - \alpha)w_R + (w_C - w_L) \leq 0].$$

Hence, $w_C \leq w_L$, which contradicts Assumption 1(ii). This contradiction establishes that, $[X_L = 0, X_C, X_R > 0]$cannot be an equilibrium. By an analogous reasoning, $[X_R = 0, X_C, X_L > 0]$ cannot constitute an equilibrium either. In any Nash equilibrium in a period 2 subgame, at least two agents must allocate positive effort to conflict. Hence, in any such equilibrium, $0 < X_C, X_R, X_L$. ■

**Proof of Proposition 1.**

By Lemma 1, any Nash equilibrium in the period 2 subgame must satisfy the first order conditions with equality, so that, using (8)-(10), we have:

$$({D_{LC}}^{\theta} + A)\left(\frac{X_C}{X^2}\right) + (1 + A)\left(\frac{X_R}{X^2}\right) = \frac{w_L}{\alpha}; \qquad \text{(N1)}$$

$$\left(\frac{X_L}{X^2} + \frac{X_R}{X^2}\right) = w_C; \qquad \text{(N2)}$$

$$\left({D_{CR}}^{\theta} + A\right)\left(\frac{X_C}{X^2}\right) + (1 + A)\left(\frac{X_L}{X^2}\right) = \frac{w_R}{\alpha}; \qquad \text{(N3)}$$

where $X = X_C + X_R + X_L$. It follows that the Nash equilibrium, given by the solution to (N1)-(N3), if it exists, must be unique. We shall show that the solution $\langle X_L^*, X_C^*, X_R^* \rangle$ to (N1)-(N3) (i) satisfies $0 < X_L^*, X_C^*, X_R^*$, so that a Nash equilibrium must exist, and (ii) is given by (11)-(13).

From (N1) and (N3),

$$\left(\frac{1+A}{{D_{CR}}^{\theta}+A}\right)\left(\frac{X_L}{X^2}\right) = \left(\frac{1}{\alpha}\right)\left(\frac{w_R}{({D_{CR}}^{\theta}+A)} - \frac{w_L}{({D_{LC}}^{\theta}+A)}\right) + \left(\frac{1+A}{{D_{LC}}^{\theta}+A}\right)\left(\frac{X_R}{X^2}\right). \qquad \text{(N4)}$$

Using (N2) and (N4),

$$w_C = \left(\frac{1}{\alpha}\right)\left(\frac{w_R}{({D_{CR}}^{\theta}+A)} - \frac{w_L}{({D_{LC}}^{\theta}+A)}\right)\left(\frac{{D_{CR}}^{\theta}+A}{1+A}\right) + \left[\left(\frac{{D_{CR}}^{\theta}+A}{{D_{LC}}^{\theta}+A}\right) + 1\right]\left(\frac{X_R}{X^2}\right). \qquad \text{(N5)}$$

Hence,

$$\left(\frac{X_R}{X^2}\right) = \left[w_C - \left(\frac{1}{\alpha}\right)\left(\frac{w_R}{({D_{CR}}^{\theta}+A)} - \frac{w_L}{({D_{LC}}^{\theta}+A)}\right)\left(\frac{{D_{CR}}^{\theta}+A}{1+A}\right)\right]\left[\left(\frac{{D_{CR}}^{\theta}+A}{{D_{LC}}^{\theta}+A}\right) + 1\right]^{-1}. \qquad \text{(N6)}$$

From (N1) and (N2), respectively:

$$\frac{X_C}{X^2} = \left(\frac{1}{\alpha}\right)\left(\frac{w_L}{{D_{LC}}^{\theta}+A}\right) - \left(\frac{1+A}{{D_{LC}}^{\theta}+A}\right)\left(\frac{X_R}{X^2}\right), \qquad \text{(N7)}$$

$$\frac{X_L}{X^2} = w_C - \frac{X_R}{X^2}. \qquad \text{(N8)}$$

Using (N7)-(N8),

$$\frac{1}{X} = \left(\frac{1}{\alpha}\right)\left(\frac{w_L}{{D_{LC}}^{\theta}+A}\right) + w_C - \left(\frac{1+A}{{D_{LC}}^{\theta}+A}\right)\left(\frac{X_R}{X^2}\right).$$

Hence, recalling (N6),

$$\frac{1}{X} = \left(\frac{1}{\alpha}\right)\left(\frac{w_L}{{D_{LC}}^{\theta}+A}\right) + w_C - \left(\frac{1+A}{{D_{CR}}^{\theta}+2A+{D_{LC}}^{\theta}}\right)\left[w_C - \left(\frac{1}{\alpha}\right)\left(\frac{w_R}{({D_{CR}}^{\theta}+A)} - \frac{w_L}{({D_{LC}}^{\theta}+A)}\right)\left(\frac{{D_{CR}}^{\theta}+A}{1+A}\right)\right].$$

$$= \left[\frac{(w_R+w_L)\left(\frac{1}{\alpha}\right)+w_C(A+{D_{CR}}^{\theta}+{D_{LC}}^{\theta}-1)}{{D_{CR}}^{\theta}+2A+{D_{LC}}^{\theta}}\right] = \frac{(w_R+w_L)-w_C}{\alpha({D_{CR}}^{\theta}+2A+{D_{LC}}^{\theta})} + w_C > 0; \qquad \text{(N9)}$$

since, by Assumption 1(i), $(w_R + w_L) - w_C > 0$. Hence:

$$\infty > X = \left( \frac{D_{CR}{}^{\theta} + D_{LC}{}^{\theta} + 2A}{(w_R + w_L)\left(\frac{1}{\alpha}\right) + w_C\left(A + D_{CR}{}^{\theta} + D_{LC}{}^{\theta} - 1\right)} \right) > 0. \qquad \text{(N10)}$$

Now notice that, by (N9), since $\theta > 1$, Assumption 1(i) implies: (a) X > 0, and (b) X is increasing in $a_C$ over $(\frac{a_R - a_L}{2} + a_L, a_R]$ and decreasing in $a_C$ over $[a_L, a_L + \frac{a_R - a_L}{2})$, so that,

$$0 < \left( \frac{2^{1-\theta} + 2A}{(w_R + w_L)\left(\frac{1}{\alpha}\right) + \left((2^{1-\theta} - 1) + A\right) w_C} \right) \leq X \leq \left( \frac{\alpha + 2(1-\alpha)}{(w_R + w_L) + (1-\alpha) w_C} \right). \qquad \text{(N11)}$$

Furthermore, by (N9),

$$\frac{1}{X} = \frac{(w_R + w_L) - w_C}{\left(\alpha\left(D_{CR}{}^{\theta} + D_{LC}{}^{\theta} - 2\right) + 2\right)} + w_C; \qquad \text{(N12)}$$

so that, since $\left(D_{CR}{}^{\theta} + D_{LC}{}^{\theta} - 2\right) < 0$, $X$ is decreasing in $\alpha$.

Now, using (N8) and (N9), and by Assumption 1(i),

$$\frac{X_C}{X^2} = \left(\frac{1}{X} - w_C\right) = \frac{(w_R + w_L) - w_C}{\alpha\left(D_{CR}{}^{\theta} + 2A + D_{LC}{}^{\theta}\right)} > 0. \qquad \text{(N13)}$$

Using (N7) and (N13),

$$\left(\frac{X_R}{X^2}\right) = w_L - \left( \frac{w_R + w_L - w_C}{\frac{D_{CR}{}^{\theta} + A}{D_{LC}{}^{\theta} + A} + 1} \right). \qquad \text{(N14)}$$

Since, by Assumption 1(i), $(w_R + w_L - w_C) > 0$, the RHS is minimized at $a_C = a_R$. Hence,

$$\left(\frac{X_R}{X^2}\right) \geq w_L - \left( \frac{w_R + w_L - w_C}{\frac{A}{1+A} + 1} \right) = \left( \frac{w_L(1-\alpha) + (w_C - w_R)}{2-\alpha} \right) > 0; \qquad \text{(N15)}$$

using Assumption 1(ii). Analogously, using Assumption 1(ii), (N8) and (N14),

$$\left(\frac{X_L}{X^2}\right) = w_R - \left( \frac{w_R + w_L - w_C}{\frac{D_{LC}{}^{\theta} + A}{D_{CR}{}^{\theta} + A} + 1} \right) \geq \left( \frac{w_R(1-\alpha) + (w_C - w_L)}{2-\alpha} \right) > 0. \qquad \text{(N16)}$$

Proposition 1 follows immediately from (N13), (N15) and (N16). ■

**Proof of Corollary 2.**

Since the Nash equilibrium in the period 2 subgame is interior, using (1) and (9), $s_C = 1 - w_C X$. Then, using (6), C's payoff is:

$$v_C = s_C - w_C(s_C X) = s_C(1 - w_C X) = (1 - w_C X)^2. \qquad \text{(N17)}$$

By (N17), C's pay-off is monotonically declining in total conflict. Hence, C's pay-off is maximized by choosing $a_C$ so as to minimize total conflict. Recalling that $\theta > 1$, and Assumption 1(i), Corollary 2 follows from (14). ■

**Proof of Corollary 3**. Now, noting Corollary 2 and using (N10), in equilibrium, we have:

$$w_C X = \left( \frac{1}{\left( \frac{\left(\frac{w_R + w_L}{w_C}\right) - 1}{2 - 2\alpha\left(1 - 2^{-\theta}\right)} \right) + 1} \right). \tag{N18}$$

In light of Assumption 1(i), it follows from (N18) that $w_C X$ is monotonically decreasing in both $\alpha$ and $\theta$, with $\lim_{\alpha \to 1, \theta \to \infty} w_C X = 0$. Since, using (1) and (9), $s_C = 1 - w_C X$, we then have the first claim in Corollary 3. Now, by Assumption 1(i) and (N18), $X$ is monotonically decreasing in $\alpha$, with $\lim_{\alpha \to 0} X = \left( \frac{1}{\frac{w_R + w_L - w_C}{2} + w_C} \right)$, $\lim_{\alpha \to 1} X = \left( \frac{1}{\frac{w_R + w_L - w_C}{2^{1-\theta}} + w_C} \right)$. That $v_C$ is rising in $\alpha$ follows from (N17) and (N18). ■

**Proof of Proposition 2.**

That, given $[A + (2^{1-\theta} - 1)] < 0$ (resp. > 0), a decline in $w_C$ reduces (resp. increases) the equilibrium level of conflict, $X^*$, follows from (15). Since the Nash equilibrium in the period 2 subgame is interior by Proposition 1, using (1) and (9), $s_C = 1 - w_C X$. By (N14) and (N16), using Corollary 2,

$$s_R = \left( \frac{w_L - w_R + w_C}{w_R - w_L + w_C} \right) s_L;$$

so that:

$$s_L = \left(\frac{1}{2}\right)(w_R - w_L + w_C)X; \tag{N19}$$

$$s_R = \left(\frac{1}{2}\right)(w_L - w_R + w_C)X. \tag{N20}$$

Now suppose $[A + (2^{1-\theta} - 1)] < 0$. Since a decline in $w_C$ reduces $X$, (N19) and (N20) imply that $s_L$ and $s_R$must both decrease as $w_C$ falls. $s_C$ must increase, and, by (N17), so must C's pay-off $v_C$. Using (5), (N19) and (N20), and recalling Corollary 2, the $L$'s subgame perfect equilibrium payoff is:

$$v_L = \\ \left(1 - \frac{1}{2^\theta}(1 - w_C X) - \left(\frac{1}{2}\right)(w_L - w_R + w_C)X\right) + A\left(\frac{1}{2}\right)(w_R - w_L + w_C)X \\ - \left(\frac{w_L}{\alpha}\right)\left(\frac{1}{2}\right)(w_R - w_L + w_C)X^2$$

$$= \left(1 - \frac{1}{2^\theta}\right) - \left(\frac{1}{2}\right)(w_L - w_R)X[(A+1) - w_L X] + \left(\frac{w_C X}{2}\right)\left[\left(A + 2^{1-\theta} - 1\right) - \left(\frac{w_L}{\alpha}\right)X\right]. \quad \text{(N21)}$$

Recall that, as already proved, $X$ is increasing in $w_C$ in equilibrium. Hence, the term $\left(\frac{w_C X}{2}\right)\left[\left(A + 2^{1-\theta} - 1\right) - \left(\frac{w_L}{\alpha}\right)X\right]$ is decreasing in $w_C$ in equilibrium when $\left(A + 2^{1-\theta} - 1\right) < 0$. It follows that $v_L$ is decreasing in $w_C$ in equilibrium when $\left(A + 2^{1-\theta} - 1\right) < 0$ provided $(w_L = w_R)$. By an analogous argument, the same claim holds for $v_R$. Proposition 2 follows by continuity. ■

**Proof of Remark 1.**

That, given $\left[A + \left(2^{1-\theta} - 1\right)\right] > 0$ a decline in $w_C$ increases the equilibrium level of conflict, $X^*$, follows from (15). Now suppose $(w_L = w_R)$. Then, by (N19) and (N20), ${s_L}^*$ and ${s_R}^*$ are both increasing in $w_C X^*$, which in turn is increasing in $w_C$ (recall (N18)). Lastly, recalling (N21), when $(w_L = w_R)$, the ideologues' equilibrium pay-offs are given by:

$$v_L = v_R = \left(1 - \frac{1}{2^\theta}\right) + \left(\frac{w_C X}{2}\right)\left[\left(A + 2^{1-\theta} - 1\right) - \left(\frac{w_L}{\alpha}\right)X\right].$$

Notice that $\left(\frac{w_C X}{2}\right)\left[\left(A + 2^{1-\theta} - 1\right) - \left(\frac{w_L}{\alpha}\right)X\right] = \left(\frac{w_C X}{2\alpha}\right)\left[\left(1 - 2\alpha + 2^{1-\theta}\alpha\right) - w_L X\right]$. Consider the term $Z = \left[1 - w_L X - 2\alpha(1 - 2^{-\theta})\right]$. Now, by Assumption 1(i) and (N18), $X$ is monotonically decreasing in $\alpha$, with $\lim_{\alpha \to 0} X = \left(\frac{1}{\frac{w_R + w_L - w_C}{2} + w_C}\right)$. Hence, $\lim_{\alpha \to 0} Z = 1 - \left(\frac{2w_L}{w_R + w_L + w_C}\right) > 0$. Now, $Z > 0$ only if $1 - 2\alpha\left(1 - 2^{-\theta}\right) > 0$, i.e., only if $\alpha < \frac{1}{2\left(1 - 2^{-\theta}\right)}$. Hence, by continuity, there exists $\bar{\alpha} \in (0, \frac{1}{2\left(1 - 2^{-\theta}\right)})$ such that $Z > 0$ whenever $\alpha < \bar{\alpha} < \frac{1}{2\left(1 - 2^{-\theta}\right)}$. Given any $\alpha < \bar{\alpha} < \frac{1}{2\left(1 - 2^{-\theta}\right)}, \alpha > 0$:

$$\frac{dv_L}{dw_C} = \frac{dv_R}{dw_C} = \left(\frac{1}{2\alpha}\right) Z \frac{d(w_C X)}{dw_C} - \left(\frac{w_C X}{2\alpha}\right)\left(\frac{w_L}{\alpha}\right)\frac{dX}{dw_C} > 0;$$

since $Z > 0$, $\frac{d(w_C X)}{dw_C} > 0$ (by (N18)), and $\frac{dX}{dw_C} < 0$ (since $(1 - 2\alpha\left(1 - 2^{-\theta}\right) > 0)$). ■

**Proof of Proposition 3.**

Using (11), (15) and Corollary 2,

$$X_C^* = \left( \frac{1}{\sqrt{\frac{(w_R + w_L) - w_C}{(2 - 2\alpha(1 - 2^{-\theta}))}} + w_C \sqrt{\frac{(2 - 2\alpha(1 - 2^{-\theta}))}{(w_R + w_L - w_C)}}} \right)^2 .$$

Let $Z = \sqrt{\frac{(w_R+w_L)-w_C}{\left(2-2\alpha\left(1-2^{-\theta}\right)\right)}}$, $\sigma = Z + \frac{w_C}{Z}$. Then $\frac{d\sigma}{dZ} = 1 - \frac{w_C}{Z^2}$, so that $\frac{d\sigma}{dZ} > 0$ (resp. < 0) if $Z^2 > w_C$ (resp. $< w_C$). Thus, $\frac{dX_C^*}{d(Z^2)} < 0$ (resp. > 0) if $\left[\frac{(w_R+w_L)}{w_C} - 1 > 2\left(1 - \alpha\left(1 - 2^{-\theta}\right)\right)\right]$ (resp. $< 2(1 - \alpha\left(1 - 2^{-\theta}\right))$). By Assumption 1, $\left[0 < \frac{(w_R+w_L)}{w_C} - 1 < 1\right]$. The term $2(1 - \alpha\left(1 - 2^{-\theta}\right))$ is falling in both $\alpha$ and $\theta 2^{1-\theta} \leq 2(1 - \alpha\left(1 - 2^{-\theta}\right)) \leq 2$, and $0 < 2^{1-\theta} < 1$. At $\theta = 1$, $2^{1-\theta} = 1$. Hence: there exists $\varepsilon > 0$ such that: if $\theta \in (1 + \varepsilon)$, then $\frac{dX_C^*}{d(Z^2)} > 0$. If $2^{1-\theta} < \left(\frac{(w_R+w_L)}{w_C} - 1\right)$, then there exists $\tilde{\alpha} \in (0,1]$ such that: $\frac{dX_C^*}{d(Z^2)} < 0$ (resp. $> 0$) if $\alpha > \tilde{\alpha}$ (resp. $<\tilde{\alpha}$); $\tilde{\alpha} = 1$ if $2^{1-\theta} \geq \left(\frac{(w_R+w_L)}{w_C} - 1\right)$ and $\tilde{\alpha} \in (0,1]$ otherwise. At $\alpha = 0, X_C^* = \left(\frac{1}{\sqrt{\frac{(w_R+w_L)-w_C}{2}} + w_C\sqrt{\frac{2}{(w_R+w_L-w_C)}}}\right)^2$. At $\alpha = 1, X_C^* = \left(\frac{1}{\sqrt{\frac{(w_R+w_L)-w_C}{2^{1-\theta}}} + w_C\sqrt{\frac{2^{1-\theta}}{(w_R+w_L-w_C)}}}\right)^2$.

Suppose $\frac{1}{\sqrt{\frac{(w_R+w_L)-w_C}{2}} + w_C\sqrt{\frac{2}{(w_R+w_L-w_C)}}} < \frac{1}{\sqrt{\frac{(w_R+w_L)-w_C}{2^{1-\theta}}} + w_C\sqrt{\frac{2^{1-\theta}}{(w_R+w_L-w_C)}}}$. Then $2^{1-\theta} < \left(\frac{(w_R+w_L)-w_C}{w_C}\right) < 2\left(\frac{1-2^{-\theta}}{2^{\theta}-1}\right)$, so that $2^{1-\theta} < \left(\frac{(w_R+w_L)}{w_C} - 1\right)$. ■

**Proof of Proposition 4.**

(i) Using (N18), (N19) and (N20), and recalling that, by Corollary 3, $X^* < \lim_{\alpha \to 0} X^* = \left(\frac{2}{w_R+w_L+w_C}\right)$, and that $\check{s}_R = \frac{w_L}{w_L+w_R}$, $\check{s}_L = \frac{w_R}{w_L+w_R}$;

$$s_L{}^* = \left(\frac{1}{2}\right)(w_R - w_L + w_C)X^* < \left(\frac{w_R-w_L+w_C}{w_R+w_L+w_C}\right) = \left(\frac{w_L+w_R}{w_R}\right)\left(\frac{w_R-w_L+w_C}{w_R+w_L+w_C}\right)\check{s}_L;$$

$$s_R{}^* = \left(\frac{1}{2}\right)(w_L - w_R + w_C)X^* < \left(\frac{w_L-w_R+w_C}{w_R+w_L+w_C}\right) = \left(\frac{w_L+w_R}{w_L}\right)\left(\frac{w_L-w_R+w_C}{w_R+w_L+w_C}\right)\check{s}_R.$$

Now, suppose $\left(\frac{w_L+w_R}{w_R}\right)\left(\frac{w_R-w_L+w_C}{w_R+w_L+w_C}\right) \geq 1$. Then $w_C \geq (w_L + w_R)$, which contradicts Assumption 1(i). Hence $s_L{}^* < \check{s}_L$. By an exactly analogous argument, $s_R{}^* < \check{s}_R$.

(ii) By Corollary 3, $X^*$ is decreasing in $\alpha$, with $\lim_{\alpha\to 0} X^* = \left(\frac{1}{\frac{w_R+w_L-w_C}{2}+w_C}\right)$, $\lim_{\alpha\to 1} X^* = \left(\frac{1}{\frac{w_R+w_L-w_C}{2^{1-\theta}}+w_C}\right)$. Recall that, by (20), $\check{X} = (\frac{1}{w_L+w_R})$. Hence, $\lim_{\alpha\to 1}(X^* - \check{X}) = (\frac{1}{w_L+w_R})[\left(\frac{2^{1-\theta}(w_L+w_R)}{w_R+w_L-w_C+2^{1-\theta}w_C}\right) - 1]$. Suppose $[\left(\frac{2^{1-\theta}(w_L+w_R)}{w_R+w_L-w_C+2^{1-\theta}w_C}\right) - 1] \geq 0$. Then $(w_L + w_R) \leq w_C$, which contradicts Assumption 1(i). Hence, when $\alpha = 1$, $X^* < \check{X}$. Now, $\lim_{\alpha\to 0}(X^* - \check{X}) = \left(\frac{2}{w_R+w_L+w_C}\right) - (\frac{1}{w_L+w_R}) = \frac{(w_L+w_R-w_C)}{(w_R+w_L+w_C)(w_L+w_R)} > 0]$. Noting that $(X^* - \check{X})$ is falling in $\alpha$, the first claim in Proposition 4 follows by continuity.

(iii) Putting $w_L = w_R = w$, and using (5) and (7), equilibrium pay-offs of the ideologues under tri-partite conflict are given by:

$$v_L{}^* = v_R^* = \left[1 - \frac{s_C^*}{2^\theta} - \left(\frac{1-s_C^*}{2}\right)\right] + \left(\frac{1-\alpha}{\alpha}\right)\left(\frac{1-s_C^*}{2}\right) - \left(\frac{w}{\alpha}\right)\left(\frac{1-s_C^*}{2}\right)X^*$$

$$= \left[\frac{1}{2} + \left(\frac{s_C^*}{2}\right)(1 - \frac{1}{2^{\theta-1}})\right] + \left(\frac{1-\alpha}{\alpha}\right)\left(\frac{1}{2}\right) - \left(\frac{w}{2\alpha}\right)X^* - \left(\frac{1-\alpha}{\alpha}\right)\left(\frac{s_C^*}{2}\right) + w\left(\frac{s_C^*}{2\alpha}\right)X^*;$$

while those under bi-partite conflict are given by:

$$\breve{v_L} = \breve{v_R} = \frac{1}{2} + \left(\frac{1-\alpha}{\alpha}\right)\left(\frac{1}{2}\right) - \left(\frac{w}{2\alpha}\right)\check{X}.$$

Then,

$$v_L{}^* - \breve{v_L} = \left[\left(\frac{s_C^*}{2}\right)\left(2 - \frac{1}{2^{\theta-1}} - \frac{s_C^*}{\alpha}\right)\right] + \left(\frac{w}{2\alpha}\right)(\check{X} - X^*).$$

Now, by part (ii) of Proposition 4, $\lim_{\alpha\to 0}(v_L{}^* - \breve{v_L}) < 0$ and $\lim_{\alpha\to 1}(v_L{}^* - \breve{v_L}) > 0$. Proposition 4(iii) follows by continuity. ■

**Proof of Proposition 5.**

It can be shown, by an argument analogous to that used to prove Proposition 1, that, given $\left(w > \left(\frac{w_C}{2}\right)\left(\frac{1}{\delta^\theta}\right)\right)$, a Nash equilibrium, if it exists, must be interior. Now, assuming an interior solution, the first order conditions yield:

$$\left(\left(\frac{x_C}{X^2}\right)\delta^\theta + \frac{x_R}{X^2}\right) = w.$$

$$\left(\left(\frac{x_C}{X^2}\right)\delta^\theta + \frac{x_L}{X^2}\right) = w.$$

$$\left(\alpha_C\delta^\theta + (1-\alpha_C)\right)\left(\frac{x_L}{X^2} + \frac{x_R}{X^2}\right) = w_C.$$

Then:

$$\frac{x_L}{X^2} = \frac{x_R}{X^2} = \left(\frac{w_C}{2}\right)\left(\frac{1}{\alpha_C\delta^\theta+(1-\alpha_C)}\right) > 0;$$

$$\frac{x_C}{X^2} = \delta^{-\theta}\left(w - \left(\frac{w_C}{2}\right)\left(\frac{1}{\alpha_C\delta^\theta+(1-\alpha_C)}\right)\right).$$

Suppose $\delta < \left(\frac{1}{2}\right)^{\frac{1}{\theta}}$. Then $\delta < 1$, so that $\left(\frac{1}{\alpha_C\delta^\theta+(1-\alpha_C)}\right) \le \frac{1}{\delta^\theta}$. By assumption, $\left(w > \left(\frac{w_C}{2}\right)\left(\frac{1}{\delta^\theta}\right)\right)$. Then $\left(\frac{x_C}{X^2}\right) > 0$. Hence, we get (23), (25) and (26) as the unique characterization of a Nash equilibrium.

By (23), $X^*$ is increasing in $\delta$ if $(2w(1-\alpha_C) - w_C) \ge 0$. Since $\left(w > \left(\frac{w_C}{2}\right)\left(\frac{1}{\delta^\theta}\right)\right)$ by assumption, and $\left(\frac{1}{\delta^\theta}\right) > 1$. Hence $(2w - w_C) > 0$. Thus, by continuity, there exists $\varepsilon \in (0,1)$ such that $X^*$ is increasing in $\delta$ if $\alpha_C \in (0,\varepsilon)$. Since $\delta < \left(\frac{1}{2}\right)^{\frac{1}{\theta}}$, (23) implies $X^*$ is increasing in $w_C$ and increasing in $\alpha_C$. It follows from (25) that $s_L, s_R$ are increasing in $w_C$ and $\alpha_C$. Since $\delta < \left(\frac{1}{2}\right)^{\frac{1}{\theta}}$, $1 - 2\delta^\theta > 0$. Recalling that $X^*$ and ${s_L}^*$ are both increasing in $\alpha_C$ and $w_C$, (26) implies that ${v_L}^*, {v_R}^*$ are falling in $\alpha_C$ and $w_C$. ■