

“Poverty, Economics, and Conflict Management”*

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1 Introduction

In many discussions of the economics of conflict (civil wars, protests, political turmoil, strikes, etc.), the poor are treated as being in opposition to those who, by exploiting them, became rich, and conflict itself is traced to underlying disparities in such things as income and opportunities. Obvious questions following from such discussions are whether conflict reduces inequalities, and if so, whether it can be avoided by adopting redistributive policies.

But there are many instances of poor groups being at sometimes violent odds with other equally poor groups. This paper proposes some explanations, based on standard economic theory, of why this might happen among groups of the same income class that might otherwise feel solidarity with each other, and why societies characterised by generalised poverty might be trapped in an equilibrium of inter-group hostilities and internecine antagonisms that are replicated over generations. It employs a neoclassical model of conflict that provides insight into the conflict between haves and have-nots, but adds to it the actions of a third party (the government) towards identifiable groups to address conflict in the context of generalised poverty.

The infamous divide-and-rule tactic has continued in many post-colonial countries, involving the cultivation of support from a segment of the population by enhancing their economic prospects while neglecting other segments. Various countries have experimented with the mechanisms by which this tactic is pursued, one such innovation being the strategic provision by the central government of local public goods to sympathetic jurisdictions. This paper argues that just as there are innovations in the divide-and-rule tactic, there are also innovations in government that could be readily adopted to break the viscous cycle of conflict in the context of generalised poverty.

Though the discussion of conflict among the poor attempts to be general, it is actually based on the experience of conflict in Guyana, a country that is one of 41 Heavily Indebted Poor Countries (HIPC). Conflict is not new to Guyana, having existed from the time of slavery and indentureship. Though the conflict had originally taken the form of protests against plantation owners, conflict between slaves and indentured servants emerged due to the clever divide-and-rule tactics adopted by plantation owners, and remains in post-colonial Guyana as conflict between the country's two major ethnic groups - the scions of African slaves and Indian indentured servants. The conflict is given a distinctly political flavour because the two dominant political parties, the People's Progressive Party (PPP) and the People's National Congress (PNC), draw their mass support from the Indo-Guyanese and Afro-Guyanese segments of the population, respectively.

Politics and ethnicity are indeed real issues in present-day conflict in Guyana, but the economic dimensions of conflict are too often overlooked. Indeed, it is quite possible that the economic issues are more fundamental to the conflict than are the political and ethnic ones. A key issue in the economics of conflict in Guyana is that the country's poverty and the severely limited resources and opportunities available to citizens make them depend more on the entitlements dispensed by the State and less on the entitlements associated with individual effort, enterprise, and wealth for achieving minimum levels of well-being, than is the case in rich countries. This economic reality offered tailor-made opportunities for successive governments to pursue the

divide and rule tactics of the plantocracy in updated forms, and particularly for the incumbent to extend patronage to its supporters in the form of local public goods whose benefits accrue mainly to sympathetic jurisdictions. Indeed it is the theme of this article that conflict tends to increase in poor countries that depend heavily on government precisely because of this opportunity to cultivate political support among the masses.

The paper is organised as follows. A neoclassical model of the economics of conflict is presented in Section 2. The model assumes that conflict is the rational outcome of the interaction of preferences, opportunities and perceptions, but in applying this model to conflict among the poor this article does not necessarily assume that behaviour is rational in the narrow sense of being self-interested. Indeed, it is assumed that preferences might sometimes be better explained by the notion of reciprocity than by rationality. Section 3 uses the model to explain how third party action in poor communities could lead to conflict among the poor when the central government strategically provides local public goods to sympathetic jurisdictions. It does so by noting how opportunities, preferences and perceptions can become more conflictual on account of this kind of third party action. Section 4 discusses the management of conflict by indicating the options relevant for making opportunities, preferences and perceptions less conflictual. The conclusion in Section 5 underscores the importance of economic modelling to understanding conflict and designing conflict management options, and notes the limitations of the analysis.

2 An Economic Theory of Conflict

Hirshleifer (1984, 1995) outlines an economic model of conflict that emphasises *rationality* as the basis of conflict. The elements of the model are preferences, opportunities and perceptions, corresponding to the “traditional issues debated by historians and political scientists about the ‘causes of war’: Is war mainly due to hatred and ingrained pugnacity (hostile preferences)? Or to the prospects for material gain (opportunities)? Or is war mainly due to mistaken perceptions, on one or both sides, of the other’s motives or capacities.”¹ The model assumes that conflict occurs because persons are greedy, not necessarily because they are aggrieved. In particular, *homo economicus* is faced with a choice, either to produce for himself or to appropriate what others have produced; in other words either to live by the sweat of his brow or to be a predator on others. The latter option naturally leads to conflict.

2.1 Preferences. Individuals might have malevolent, neutral or benevolent preferences, with the likelihood of conflict greater if persons have malevolent preferences. *Malevolent* preferences are represented in Fig. 1(a) for the two-person case, the two persons being Bharat (a representative of Indo-Guyanese in the Guyana context) and Robert (a representative of Afro-Guyanese).

¹Hirshleifer (1985), p. 63.

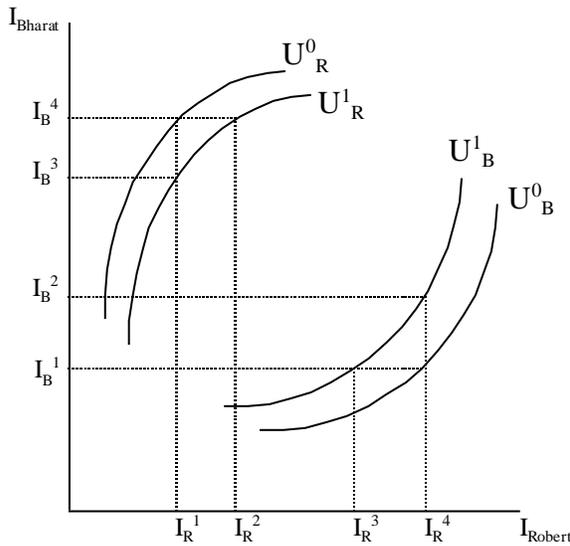


Figure 1(a) Malevolent Preferences

Neutral preferences are not illustrated, but will take the form of straight line indifference curves. In terms of Fig. 1(a), the indifference curves for Robert will be a set of vertical straight lines, indicating that Robert's sense of well being will be unaffected by Bharat's income but that it will increase with his (Robert's) income. Similarly, the indifference curves for Bharat will be a set of horizontal lines. Horizontal indifference curves for Bharat in Fig. 1(a) indicate that he will be unaffected by Robert's level of income. Benevolent preferences are presented in Fig. 1(b), below.

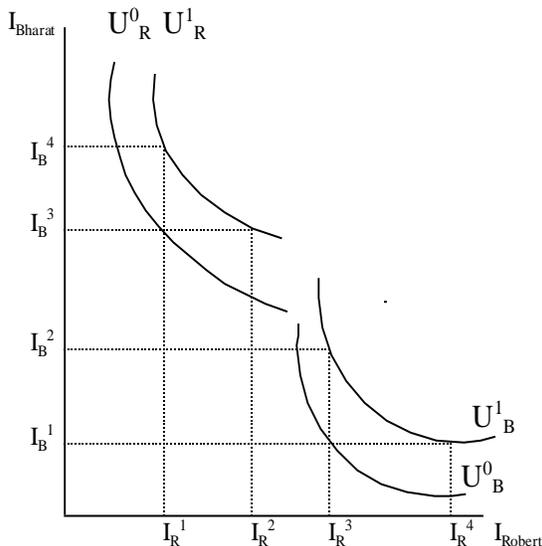


Figure 1(b) Benevolent Preferences

The indifference curves are drawn to indicate that each individual has a greater sense of well-being when his income increases. Thus, Bharat is on the higher indifference curve U_B^1 when his income rises from I_B^1 to I_B^2 . Similarly, Robert is on the higher indifference curve U_R^1 when his income rises from I_R^1 to I_R^2 .

Bharat and Robert are clearly malevolent towards each other because each is better off with a fixed income as long as the income of the other person declines. Thus, Bharat is better off with the same level of income I_B^1 as long as Robert's income declines from I_R^4 to I_R^3 . Similarly, Robert is better off with an unchanged level of income as long as Bharat's income declines from I_B^4 to I_B^3 .

The indifference curves are drawn to indicate that each individual has a greater sense of well-being when his income increases, *ceteris paribus*. Thus, Bharat is on the higher indifference curve U_B^1 when his income rises from I_B^1 to I_B^2 . Similarly, Robert is on the higher indifference curve U_R^1 when his income rises from I_R^1 to I_R^2 .

Bharat and Robert are clearly benevolent towards each other because each is better off with a fixed income as long as the income of the other person increases. Thus, Bharat is better off with the same level of income I_B^1 as long as Robert's income increases from I_R^3 to I_R^4 . Similarly, Robert is better off with an unchanged level of income as long as Bharat's income increases from I_B^3 to I_B^4 .

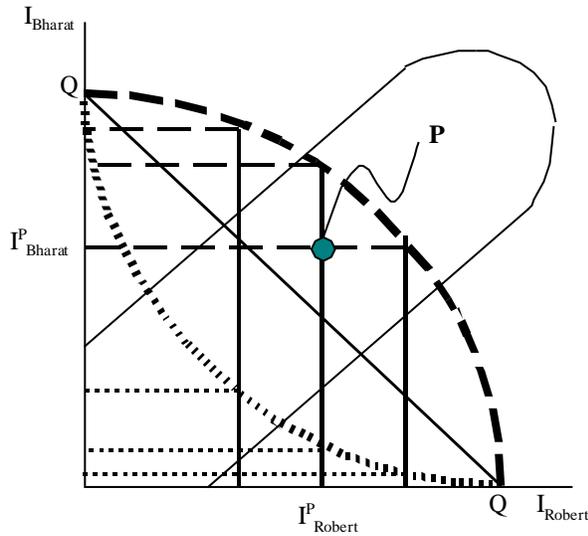
It is important to note that this idea that preferences can be either benevolent or malevolent involves radical departures from standard economic theory, that is from the assumptions of rationality and the exogeneity of preferences. Another assumption is that a group can be modelled as an individual, or that members of a group behave as if their individual preferences were identical. These departures from the canonical model, driven largely by research in experimental economics, game theory, biology and psychology, are not without precedent in the literature and indeed are no longer regarded as heretical.² The assumption that different groups could be treated as different individuals might be justified by recognising that individuals tend to coalesce around a shared or common attribute or characteristic (religion, race, class) and behave identically in important respects, often suppressing their individuality in order to conform to the group's sanctioned behavioural norms.

2.2 Opportunities. Because resources are scarce, if those resources are used efficiently it will be impossible to increase the opportunities for any one person without using additional resources, but the additional resources can only come by reducing some other person's opportunities. Scarcity implies that opportunities will create some conflict and require some trade-offs. More than this, these (conflictual) opportunities might or might not require broad-mindedness. Opportunities are said to require broad-mindedness when Bharat is required to make successively larger sacrifices of his own opportunities for Robert's benefits to increase by some given amount. Opportunities do not require broad-mindedness if Bharat needs to make smaller and smaller concessions to his benefits in order for Robert's share of the opportunities to increase by some given amount. This is illustrated in Fig. 2.

In Fig. 2 the lines QQ are Peaceful Opportunity Sets (POS) that indicate the income that can be produced from society's scarce resources and the income distributions that are available to Bharat and Robert. On any POS the income shares must add up to the maximum aggregate income that can be produced. Because QQ is negatively sloped, any policy that allows Bharat to earn a larger income will necessarily require income compromises on the part of Robert. The rate at which the compromises have to be made as income is redistributed differs according to the degree of broad-mindedness required of individuals. The two more intuitively appealing cases are given by the full lines. *Neutral* broad-mindedness requires constant compromises by one party as income increases for the other, and can be represented by the negatively sloped, straight-line POS. *Complementary* opportunities are given by the largely positively sloped opportunity set (not labelled).

Note that the point **P** in Fig. 2 does not relate to the current discussion of opportunities, but rather to perceptions.

²Thus Hirshleifer (1995) notes that the assumption of benevolent or malevolent preferences is supported by the evolutionary biologists' idea of 'genetic relatedness,' while others note that religion (Barro, 2003) and social capital (Dasgupta, 2001) do affect beliefs and therefore preferences, i.e., that preferences are endogeneous.



If the income opportunities were as given by the **heavy dashed** QQ, Bharat will have to make bigger and bigger compromises as Robert's income increases by some given amount and *vice versa*. Redistribution requires *increasing compromises*, analogous to the 'increasing opportunity costs' of standard theory.

If the income opportunities were as given by the **heavy dotted** QQ, Bharat will have to make *decreasing* compromises as Robert's income increases by some given amount, and *vice versa*.

Neutral opportunities are given by the negatively sloped straight line, and complementary opportunities are given by the (unlabelled) full line that is essentially positively sloped.

Figure 2 Opportunities

2.3 Perceptions. The point **P** in Fig. 2 specifies a particular income distribution that corresponds to an income of $I_{\text{Robert}}^{\text{P}}$ and $I_{\text{Bharat}}^{\text{P}}$ to Robert and Bharat, respectively. **P** is the perception by Robert, for instance, that $I_{\text{Robert}}^{\text{P}}$ and $I_{\text{Bharat}}^{\text{P}}$ will accrue to him and to Bharat respectively if conflict were to break out; in short it is Robert's perception of the outcome of conflict. Robert could clearly benefit from a higher income anywhere east or north east of **P**, all the way to the opportunity frontier QQ, but such opportunities are only available by 'peaceful production,' i.e. by cooperating with Bharat. If conflict were to break out, Robert would only expect to earn $I_{\text{Robert}}^{\text{P}}$, and this is a 'threat point' in the language of game theory.

Robert and Bharat do not necessarily need to have identical perceptions of the opportunities from conflict, as it is quite possible for either to be more optimistic than the other.

2.4 The Complete Hirshleifer Model

The shaded areas in Fig. 3(a) and Fig 3(b) below represent the Potential Settlement Space (PSS). It shows the 'peaceful' income shares attainable by Robert and Bharat, that each person perceives to be better for him than the conflict outcome. The PSS "represents a 'region of mutual advantage' wherein both parties can gain by peaceful compromise."³ In this region, "*both* parties regard themselves as doing better by settling than by fighting."⁴

³Hirshleifer (1988), p. 514.

⁴Hirshleifer (1985), p. 63.

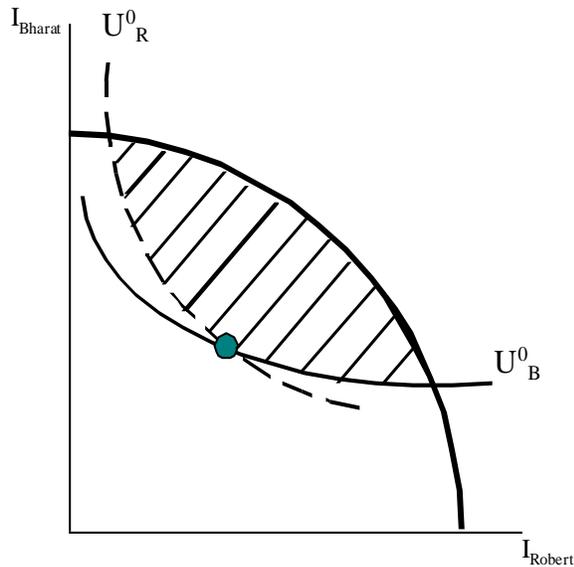


Figure 3(a) PSS with Benevolence & Identically Pessimistic Perceptions; Broad-mindedness warranted

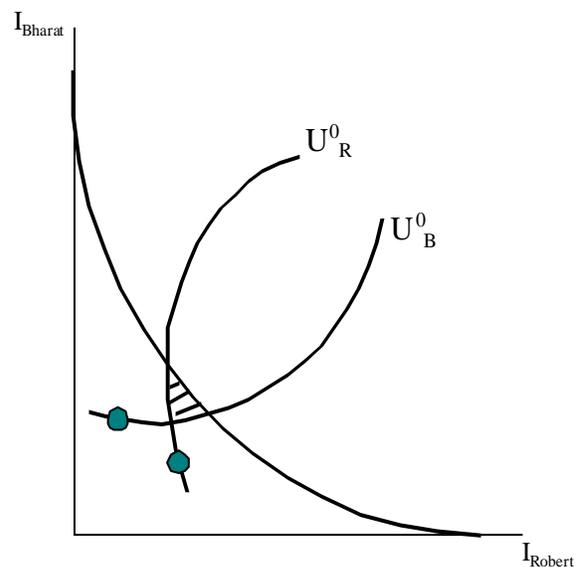


Figure 3(b) PSS with Malevolence & Divergent Perceptions; Broad-mindedness not warranted

The underlying idea is simple: The opportunity frontier represents a scarce ‘prize’ that must be divided between individuals who may or may not be intolerant of each other, in a manner that either requires or does not require broad-mindedness on the part of individuals, who in turn have clear views about the relative shares of the prize that will accrue to each when they do or do not cooperate. The model is general in the sense that the prize might be national income, public goods, contracts, access to a particular resource, rent, space for oneself (larger houselots), etc.

The larger (smaller) the PSS, the smaller (larger) the likelihood of conflict, and the smaller (larger) the appeal of criminal predation on others’ production. The PSS decreases and conflict becomes more likely the more malevolent the parties, the smaller the compromise required of others as a person’s income increases, and the more optimistic the parties are about the outcome of conflict.

3 Poverty and Conflict

The Hirshleifer model suggests an economic explanation for conflict. It provides an appealing explanation of why the poor might consider a path of conflict *vis á vis* the rich, given the clear prospects for material gain, the hostility with which the poor might regard exploitative elites and the perception that life at the margin is so precarious and fragile, and opportunities so limited, that the expected returns from conflict might exceed the prospects from peaceful settlement even when victory is unlikely. Hirshleifer (1995) even contends that the poor might have a comparative advantage in conflict because peaceful production is out of the question for persons without jobs, capital, access to credit, etc.

But the model does not explain why conflict might occur in a context of generalised poverty in which poor groups are at (sometimes violent) odds with each other. Such conflict may appear surprising. Because persons who are materially destitute cannot count on their material possessions for happiness and the security of their lives and livelihoods they are compelled to depend on their faith and *on each other* for these things. As a result, the poor often develop a sense of solidarity with their fellows that comes from their empathetic identification with each other's plight. This solidarity might actually derive from culture, kinship ties, extended family arrangements, the experience of living and surviving together, and even from an ethic of reciprocity in which primarily positive, cooperative actions occur among the poor. With any or all of these underlying causes of solidarity, a poor person might actually be directly or indirectly better off when another poor person experiences an increase in benefits and opportunities. The poor might then be naturally inclined to share and work with each other, rather than prey on each other.

How then does generalised poverty lead to increased conflict? While there is a clear sense in which abusive behaviour, alcoholism, ignorance, parental neglect, and the competitive and self-interested 'survival of the fittest' attitudes that are all associated with poverty might contribute to heightened tensions among the poor, any ensuing problems would be in the nature of inter-familial and interpersonal clashes, not conflicts such as civil wars, protests, and strikes. The Hirshleifer model suggests that if the poverty is associated with a reduced PSS, poverty will be associated with increased conflict. But does poverty *cause* the PSS to shrink, and if so does it do so by altering the structure of opportunities, preferences or perceptions (or all of these)?

3.1 Poverty and the Likelihood of Conflict

For any given set of preferences and perceptions, the PSS is smaller, and the likelihood of conflict greater, as the redistribution of opportunities requires less broad-mindedness (a decreasing rate of compromise by losers) and as the opportunity set itself shrinks closer to the origin in Fig. 3. The 'third party' opportunities over which the poor contend include the provision by the central government of public and other non-market goods whose benefits are local to a particular jurisdiction, pollution control and the regulation of externalities, titles to state land, government house lots, contracts for government, jobs in state-run agencies within localities, etc. In this analysis the emphasis will be on *local public goods provided by the central government*.

In poor countries, *local* public goods are natural candidates for use by the central government to manipulate the electorate because the poor depend heavily on publicly provided goods and services for their survival, and this creates the potential for conflict. Among these publicly provided goods and services are those such as drainage and irrigation for farming communities, community health centres, nursery schools, fire stations, schools and hospitals, whose benefits are largely local to the jurisdictions in which the goods are provided. By providing these local public goods to sympathetic jurisdictions, central governments can enhance their re-election chances by ensuring that either a majority of the electorate is cultivated throughout the country (if the electoral system is Proportional Representation or PR) or a majority of jurisdictions are wooed by its discriminating policies (if the electoral system is First Past the Post or FPTP). This section addresses how the central provision of public goods can be a potential source of potential conflict.

3.1.1 Poverty and the Peaceful Opportunity Set. When used as a means of political patronage, the centralised provision of local public goods increases the likelihood of conflict by influencing the shape and size of the POS. Local provision (by local governments and municipalities) of local public goods is infeasible in poor countries because beneficiaries do not enjoy high enough incomes to allow local governments to finance the provision of such public goods by taxing residents in local jurisdictions. Local public goods must therefore be provided by the ‘third party’ central government, but because central government budgets in poor countries are stretched, even local public goods in favoured jurisdictions will be under-provided, and for the entire economy the POS will be much closer to the origin than would have otherwise been the case. The inadequate provision of local public goods will itself reduce the size of the PSS and increase the likelihood of conflict. Intuitively, had each jurisdiction been adequately provided with local public goods they would have been more inclined to regard with benevolence any increase in local public goods in other jurisdictions.

Local public goods have technological features that themselves exacerbate the conflict associated with political patronage, by tending to make the POS convex to the origin, because local public goods are associated with *inter-jurisdictional externalities* that reduce the amount of ‘broad-mindedness’ required of residents.⁵ This is especially so if jurisdictions are close to each other, and if the population is concentrated over a small area. Consider for example the provision of an additional (drainage and irrigation) pumping station in either of two contiguous jurisdictions. Clearly, residents from both jurisdictions would benefit from the erection of a pumping station in either of the two jurisdictions, as the provision of a pumping station will generate spillover benefits for the jurisdiction in which the pumping station was *not* built. Allowing jurisdiction A to benefit from pumping station built in jurisdiction B does not really *require* broad-mindedness on the part of the residents of jurisdiction B. *Moreover, when a third party provides a local public good in any jurisdiction residents can easily (and narrow-mindedly) argue that the ‘bypassed’ jurisdiction will still benefit and therefore their concerns about ‘marginalisation’ can be denied or ignored.* All this implies that the POS will be convex to the origin, as in Fig. 3(b).

The peaceful opportunity set (POS) with local public goods on the axes will therefore be both shrunk and convex to the origin, and the likelihood of conflict will be greater, on account of the provision by central government of local public goods that have inter-jurisdictional externalities.

⁵The presence of inter-jurisdictional externalities is yet another argument for the central provision of local public goods. The idea that competition among local governments might itself lead to an efficient level of local public goods is widely known as the ‘Tiebout Model,’ but has a fundamental ‘efficiency’ problem: Because of inter-jurisdictional externalities, local government competition will not be sufficient to attain an efficient level of local public goods in this context. Thus the central government can use both efficiency and feasibility arguments to justify its involvement in the provision of local public goods.

3.1.2 Poverty and Preferences. Are the poor generally malevolent or benevolent⁶ to others, and can their preferences be influenced by third party action such as the central provision of public goods? The answer to the first of these questions probably depends on who the ‘others’ are. It may be that the poor will harbour antipathetic feelings towards the wealthy if they believe that they have been exploited by the wealthy. Another source of malevolent preferences among the poor is that the poor might belong to a group that distinguishes itself from another poor group on the basis of culture, race, religion, or history, and that conflict arises because of the distinguishing features. Alternatively the poor might have a sense of solidarity with each other that inclines them to cooperate with each other and to regard each other with benevolence, regardless of the attributes that might distinguish them. In short, poverty in itself does not determine whether preferences will be benevolent or malevolent.

On the other hand, to the extent that their preferences are endogeneous the poor shall be vulnerable to manipulation, and especially to manipulation by ‘third party’ actions. Thus poor groups that at one time might have had benevolent preferences can come to harbour malevolence towards other equally poor groups when the central government that provides local public goods discriminates against the jurisdictions that do not support it politically. It is true that benevolent groups that do not themselves benefit from the third party action should still feel better off because other groups are better off, but because of their heavy dependence on local public goods which they themselves severely lack, poor communities that would have otherwise been in solidarity with another poor group might instead come to resent the groups that are favoured by the incumbent.

This resentment might come about because the residents of the ‘bypassed’ jurisdictions might simply prefer the local public good allocations of the favoured jurisdictions,⁷ or because they view the actions of the central government as hostile, in which case they may extend their feelings of hostility to the favoured jurisdictions.⁸ If these hostilities are expressed by predatory actions towards the favoured jurisdictions the latter may themselves develop hostile feelings to the perpetrators. In either case (envy or grievance), equally poor jurisdictions might end up harbouring malevolent feelings towards each other, though the precise processes by which this would occur are different. Jurisdictions will regard each other with perpetual animosity that will

⁶Recall that malevolent persons ‘feel better’ when the income of others declines while benevolent persons regard themselves as better off when the income of others increases even if their’s remains the same.

⁷Allocations after the third party intervention are therefore not ‘envy-free.’ See Varian (1974).

⁸The argument gets involved here but the logical progression is not insignificant. The extension of hostility to residents in favoured jurisdictions can come about because it might appear to the marginalised jurisdictions that the favoured jurisdictions are being rewarded for some action or characteristic that is lacking in the marginalised jurisdictions. The action that is being rewarded might simply be political support. But if there is a coincidence of actions and characteristics, it is always possible to misconstrue the provision of local public goods to certain jurisdictions as a reward to certain characteristics, for example race. Indeed, a basic feature of ethnically divided societies is coincidence of political affiliation (i.e., the action) to a particular political party and race or ethnicity (i.e., the characteristic). An extreme danger is that the marginalised jurisdictions might infer that what is being rewarded/penalised is the characteristic of race or ethnicity, and that the central government is ‘racist’ in its budgetary policies.

be aggravated if the parties' are 'reciprocators.'⁹

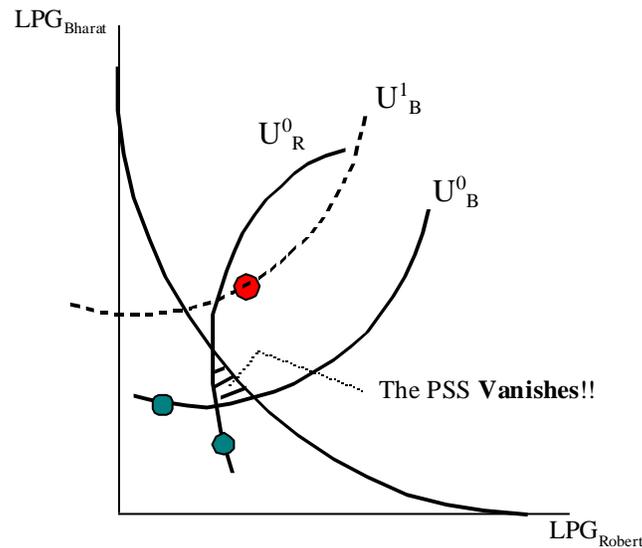


Figure 4 Bharat's Increased Optimism about the Conflict Outcome

Third party (i.e., central government) action to cultivate political support via the selective provision of local public goods to sympathetic jurisdictions can alter previously benevolent preferences and lead to the emergence of malevolent preferences, as in Fig. 1(a). This will clearly reduce the Peaceful Settlement Space and increase the likelihood of conflict.

3.1.3 Poverty and Perceptions. If Bharat, the representative member of the favoured jurisdictions in Fig. 3(b), developed the perception that he will be especially better off with continued hostilities between himself and Robert, the representative member of the 'bypassed' jurisdictions, the following diagram would depict the outcome:

Even if Robert does not get more pessimistic about the outcome of conflict for himself, all that is required for the PSS to vanish and for conflict to become a certainty is for Bharat to believe that he will be better off with conflict. Note too that in Bharat's thinking, even Robert will get more local public goods with conflict!

The question is, how can Bharat 'develop' these new and more optimistic perceptions about the outcome of conflict? Clearly, the third party central government can act to give Bharat the impression that *because of* conflict the central government will increase its budgetary

⁹Fehr, Fischbacher, and Gächter (2002) argue that a broader notion of self-interest that also embraces other-regarding preferences is found in a very common type of behaviour called *reciprocity*. This type of preference structure is one in which people are willing to "sacrifice resources to be kind to those who are being kind and to sacrifice resources to punish those who are being unkind" (p.2). Just how and if reciprocity might emerge from or be associated with the endogeneous change in behaviour from benevolence to malevolence due to third party actions, along with the relationship between this process and rationality, is not at all clear, and warrants further research.

commitment to provide him with an increased level of public goods, perhaps as compensation for the heightened tensions.

Note further that even if the poor were assumed to have benevolent preferences as in Fig. 3(a), and that those preferences were exogenous and could not be altered by third party action, all that is required for certain conflict is for either one or both parties to become more optimistic about the conflict outcome. It may be, for example, that Robert feels that conflict might force the central government to provide him with a greater share of local public goods, as discussed in Isham, Kaufman, and Pritchett (1997). This problem can also be reinforced where there is an intransigent central government.

Regardless of the nature of individual preferences, conflict can become a certainty if the perceptions of either or both parties is that the conflict outcome is to be preferred to the peaceful possibilities and this is particularly worrisome when the central government has both the ability and the incentive (divide and rule!) to create these perceptions in the minds of citizens.

4 Managing Conflict

The Hirshleifer model suggests that the likelihood of conflict will diminish if redistribution opportunities were made to require more broad-mindedness, if preferences were to become more benevolent, and if perceptions of the outcome of conflict were to become more pessimistic. The third party central government that benefits so much (politically) from conflict between poor groups is also the policy making agency that will have to effect the changes recommended below. There is therefore little incentive for these recommendations to be adopted. The first set of recommendations is designed to reduce the extent to which central government can use its position to effect a strategic allocation of local public goods to sympathetic jurisdictions in order to enhance its chances of re-election.

Singh (2003) recommends constitutional change to make central governments more accountable to local jurisdictions. This accountability can be achieved by adopting or incorporating¹⁰ First Past the Post or Single Member District electoral systems for the election of national governments. Indeed, anecdotal evidence suggests that Trinidad and Tobago which has such an electoral system experiences much less ‘conflict’ than does Guyana which has a system of Proportional Representation, though both countries are similarly configured in other electorally-sensitive respects.

Alternatively or perhaps additionally, the central government’s budget approval process should require a super-majority rather than a simple majority in Parliament.¹¹

It might also be useful to undertake policies that **reduce the poor’s dependence on government, and particularly on centrally provided local public goods**. Reducing the poor’s

¹⁰Because representation is such a sensitive issues in countries like Guyana and Trinidad and Tobago, it may be wiser to adopt *Semi-proportional* electoral systems such as the Parallel Mixed Member (PMM) system that is used in Cameroon, Croatia, Japan Guinea, Russia, Albania and Lituhanian.

¹¹It was brought to my attention by Dr. Tony Weis that participatory budgets have been adopted with tremendous success in Porto Alegre, Brazil.

dependence on central government for local public goods might involve:

- In the case of Guyana, relocating large segments of the population to geographical areas that are above sea level, that have more robust soils, and that will support local public goods in a more ‘durable’ fashion.
- Increasing the size of house lots, so that individuals are less likely to experience ‘externalities’ generated by neighbours.¹² Noise, garbage, fumes, and many other forms of pollution are more likely to be a nuisance the closer persons live to each other. Smaller house lots therefore demand more government resources to control externalities, and this can often be done in only select jurisdictions.
- Increasing the capacity of the local governments to raise revenues for their jurisdictions, beyond taxation of the poor. A novel idea for raising local revenues includes attracting inflows from migrants in the diaspora. The diaspora might well feel greater connections with their home jurisdictions and may even have relatives still living there who can benefit from a higher level of local public goods.

The next set of recommendations is intended to increase the Peaceful Settlement Space by appropriately altering opportunities, preferences and perceptions.

4.1 *Opportunities*

- Increase the provision of local public goods in all jurisdictions. This will effectively shift the POS outwards. This does not necessarily mean cutting central government expenditure in some national priorities, but might entail greater efficiency in the use of resources currently allocated to local public goods. Public sector reform itself might release more resources. Another possibility is for donor agencies to fund the provision of more local and less ‘global’ public goods across in all jurisdictions. Donor agencies will therefore be required to work directly with local governments and municipalities.
- Limit the extent of inter-jurisdictional externalities so that the opportunity set . This can be done by increasing the size of jurisdictions and instituting zoning regulations which are essentially ‘exclusion mechanisms’ that allow only local residents to benefit from local public goods. As ironic as this might sound, zoning regulations will make for an enlarged peaceful settlement set by preventing bypassed jurisdictions from benefiting from local public goods provided in other jurisdictions. Sympathetic jurisdictions will have to make increasing compromises for other jurisdictions to benefit from local public goods provided by the central government. Making compromises will become the way of life for the poor, especially if the incumbent might be voted out of power. The idea is that if the incumbent is unsure of remaining in power it will *while in power* be willing to make accommodations and compromises with non-sympathetic jurisdictions and with the opposition so that when the latter is in power it might reciprocate.

¹²This is precisely what is suggested by the Coasian idea that externalities are ‘reciprocal!’

4.2 *Preferences*

- To the extent that it is selective third party action that changes preferences, reduce the extent of third party involvement by adopting measures outlined above for reducing the dependence of the poor on central government provision of local public goods.
- Promote new social ethics through public education so that decision makers as well as residents in the various jurisdictions have benevolent preferences.
- Invest in social capital in all its forms, to increase trust among the poor and for elected representatives, to foster norms and protocols that encourage other-regarding behaviour and to create networks that allow the poor to empathise with each other.

4.3 *Perceptions*

What is required is that the poor be made to have a more pessimistic view of the outcome of conflict, or alternatively, a more optimistic view of the peaceful possibilities. Perceptions are of pivotal importance in the practice of democracy, and it often happens in poor countries that the incumbent can easily use its capacity to spend to create the perception among voters that their well-being will be greater if they supported the incumbent in future elections, even if this means conflict among the poor in various jurisdictions. The manipulation of the electorate in this regard may lead to the kind of ethnic voting that makes it impossible for the incumbent to ever lose an election. In turn, this strips the electoral system of one of its most valuable properties, enabling voters to change elected officials by constitutional means. This was the major concern of Buchanan (1954), who recommended constitutional restraints on the exercise of majority rule to prevent the tyranny of the majority that would result from the manipulation of the electorate. Such constraints will also reduce the scope for central government to act in such a manner that the poor are made to feel that they might be better off with the incumbent, even in this means conflict with other poor groups.

5 Conclusion

The analysis has some limitations. In particular, the foregoing discussion was static, implying that it is incapable of dealing with the reversal of conflict once it has begun, but once conflict has been sufficiently defused any workable and sustainable solution will have to address the issues raised in the model. If a society that is characterised by conflict is provided by a dynamic solution that brings about a cease-fire or a cessation of hostilities, the peaceful possibilities set will have to be increased significantly for peace to be an equilibrium. Note too that the characterisation of the centralised provision of local public goods as a potential source of conflict does not imply that such goods be provided privately. While that is indeed an appealing idea that will also make for a less conflictual peaceful opportunity set, privatisation of such goods has been known to introduce widespread inequities that themselves make for greater conflict. What is certainly being recommended is the local provision of local public goods. In this regard one might note the view that development aid can contribute to conflict because development aid is invariably given to the central government and used by them to provide local public goods to sympathetic jurisdictions. The ability of local governments to provide local public goods will clearly be enhanced if development aid were given directly to local jurisdictions, and at the same time donor agencies will pre-empt the assertion that aid increases conflict.

If nothing else, the economics of conflict provides a new way of looking at conflict in poor countries. The Hirshliefer model argues that conflict can be regarded as the interaction of

opportunities, preferences and perceptions. In this application of the model it was argued that conflict among the poor can be traced to the central government's 'divide and rule' actions in the provision of local public goods as political patronage to its supporters in sympathetic jurisdictions. The natural result is that conflict with residents in non-sympathetic jurisdictions becomes more likely.

Thus the likelihood of conflict can be reduced by reducing the dependence of the poor on government, by reducing the role of central government in the provision of local public goods, and by altering the structure of opportunities, preferences and perceptions to increase the so-called peaceful settlement set. In particular, opportunities must be made to require more broad-mindedness, preferences must become more benevolent and perceptions of the outcome of conflict more pessimistic.

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