

TO COOPERATE OR TO DEFECT?

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"When two rational individuals fail to cooperate, when it is at their best interest to cooperate"

Conflicts in Assam and the Demand for ST Status

According to Thomas C. Schelling, conflicts are either studied as a pathological object or are taken for granted.¹ In case of a pathological conflict, we study it as a disease and try to find its cure. In the second type of conflict, the study is confined to its behavior.² The latter was termed as 'strategy of conflict' by Schelling, since it requires the study of rationality, irrationality, conscious, unconscious, motivations, calculations etc. In applying 'strategy of conflict', there is an assumption that rational behavior is closest to the truth and is the most productive one.³ The popular discourse under game theory is the existence of two rational individuals who fail to cooperate even though it is at their best interests to cooperate. In case of conflicts, particularly identity conflicts, the situation flares up due to lack of cooperation among individuals in conflict and the government. The government's inability to meet the demands of the people, or due to pressure from the opponent groups, the conflict often escalates.

¹Thomas C.Schelling, Strategy of Conflict (Harvard University Press 1960)

²Ibid 13

³Ibid 14

Assam has been dealing with the problem of multiple conflicts pertaining to identity, land and livelihood since a long period of time. Most of the demands of the people in the State are related to the utmost need for recognition of identity and land, both being the significant concern for the people.⁴ According to Walter Fernandes and Bhaswati Borgohain, in North-East India there exist three kinds of conflict, first being the outright demand for secession, second being the one by minority communities for their rights also termed as sub-nationalism and third being the fight against transformation of demography.⁵ The first category includes the demand for Bodoland and Kamatapur, where a demand for separate state is being made by both the leaders and the militant groups. Secondly, the struggle for minority rights is witnessed in the demand for reservations in the State primarily in the form of Scheduled Tribe quota. The third issue of change in demography due to conflicts can be witnessed through the border disputes in Assam, and can also be credited to the issue of immigration to some extent. The influx of migrants in Assam has not only raised serious concerns but has also changed the demographic outline of the state.

The inability of the Government to initiate developmental policies and the scanty attention towards minority rights are weaved together. Another reason behind minority rights' movement and sense of marginalization felt by one community due to the benefits offered to other communities in the State. An important consideration in this kind of conflicts is that of inter-community conflict, where an underdeveloped community tries to attain the same level as that of a developed community. The struggle for bringing an end to marginalization serves as the initiation point for minority-rights dominant conflicts.⁶

⁴Walter Fernandes and Bhaswati Borgohain, *Journals of Dispute:Media Coverage of Conflicts in North-East* (NESRC 2017)

⁵Ibid 56

⁶One such example was visible during the field trip to a Koch-Rajbongshi village of Supariguri in Bongaigaon, where the Koch-Rajbongshis considered the inter-community imposed marginalization to be the obstacle in the growth of their community. In the Bodo Territorial Autonomous District (BTAD), the Koch-Rajbongshis are the marginalized community and are being dominated by the Bodos in the social, economic and political platforms. They cited this to be one of the reasons for their demand for ST status.

The concept of 'Scheduled Tribes' (ST) was introduced to safeguard the rights of the tribal population in India. The term 'Scheduled Tribes' was initially used by G.S Ghurye, who related people who practiced animism with the term 'Scheduled Tribes'.⁷ Later, the term was introduced as an administrative term in order to encourage the development of the tribal population in India. A method which was introduced in order to bring development in India, led to a series of conflicts for identity assertion, recent one being the claim for ST status for six communities in Assam. The continuous struggle for attaining the status of ST has led to conflicts almost in every part of India, most notable being that of the 'Jats' in Northern India. Every incident of identity assertion raises the question of 'who is an indigenous' as put down precisely by Meena Radhakrishnan in her book 'First Citizens', where the continuous debate on this term is being analyzed.⁸ The basic premise of such conflicts lies in defining the term 'indigenous' as such conflicts obtain the role of a labyrinth, without any channel of a positive circumvention from it.

Six communities in Assam, namely Morans, Mattaks, Ahoms, Koch-Rajbongshis, Chutiyas, Tea-Tribes are demanding for ST status from decades, with the demand becoming more profound after 2014 General Elections. Initially, it was believed that the issue arose as a response to oust the illegal immigrants from Assam, and to protect the identity of these communities. But as one delves deeper, the issues of concerns are greater than ousting the migrants for protection of identity of these communities. The existing tribal communities have been protesting for this particular demand, as they believe such a demand will corner the privileges available to them.⁹ In 2016, the Singla Committee was constituted under Mahesh Kumar Singla in order to decide on the issue. The Ministry of Tribal Affairs has listed down five

⁷GS Ghurye, 'The Aborigines-So-Called and their Future', (1949) 92 American Journal of Sociology 1 2017

⁸Meena Radhakrishnan, 'Introduction' in Meena Radhakrishnan (ed), *First Citizens: Studies on Adivasis, Tribals and Indigenous Peoples in India* (Oxford University Press 2016) 3

⁹Samudra Gupta Kashyap, 'As 6 Assam Groups Wait to Become STs, Other Tribes Worry', Indian Express (online), 11 October, 2016 <<http://indianexpress.com/article/india/india-news-india/assam-quota-reservations-scheduled-tribe-caste-obc-other-tribes-worry-3076108/>>

criteria for ascribing the status of ST to different communities demanding for ST status. The criteria are listed down as under-

- ♦ primitive traits
- ♦ distinctive culture
- ♦ geographical isolation
- ♦ shyness of contact with the community at large
- ♦ backwardness

The conflict arose between the communities and the Government, when the latter did not fulfill the demand within the stipulated period of time, which kept on changing with the last deadline for the demand fulfillment being 30 June, 2017. The Government is of the view that the six communities do not conform to the five criteria provided by the Ministry of Tribal Affairs. Therefore, providing them with the ST status would create further conflict. This would in turn allow various other communities to demand ST status. On the other hand, the communities believe that they fulfill all the criteria mentioned by Ministry of Tribal Affairs.¹⁰ The fact that the six communities do not fulfill the five criteria has been used to drag the issue for a very long time. While the Government believes that these six communities do not conform to these criteria, the existing tribal groups under the umbrella body of All Assam Tribal Sangha (CCTOA) oppose the very demand for ST demand.¹¹ They believe that the demand would corner the rights of the existing tribals, as the six communities constitute 59 per cent of the total population in Assam.¹²

The failure of the Singla Committee to come up with a report on the stipulated deadline of June 30, 2017 led to strikes, road and rail blockades in Assam in July.¹³ The Tai Ahom Yuva Parishad blocked the movement of oil tankers in Upper Assam, thus affecting the functioning of Oil India Limited and that of Oil and Natural Gas Limited (ONGC).

¹⁰Interview with the Student Leader of Xodoi Assam Moran Chatro Xontha and Xodoi Assam All Assam Mattak Sanmillan

¹¹Interview with Aditya Khaklary (Guwahati 23 August 2017)

¹²Census 2011

¹³Rishu Kalntri, 'Protest over ST Status', The Telegraph (online), 28 October, 2017, <https://www.telegraphindia.com/1170702/jsp/northeast/story_159719.jsp

Similar protests were witnessed in the Kokrajhar and Bongaigaon where All Koch Rajbongshi Students Union (AKRASU) led strikes and blockades following Government's failure to meet the demands within 100 days.¹⁴ The strikes and blockades did not end in June and a recent strike was organized on 25 October, 2017 by the Adivasi community leaders in Kokrajhar and Bongaigaon, to pressurize the Government to take steps as soon as possible.

The issue encompasses within it many layers, and cannot be confined solely to the protection of identity in relation to the immigrants. The demands of the six communities under the umbrella term of ST status include several related demands, which they believe will be solved once they are conferred the particular status. The main demands of the six communities are land rights, political representation and reservations pertaining to education.¹⁵

The present conflict is locked in a Prisoner's Dilemma, where two rational individuals might not co-operate even though it is at their best interest to cooperate. In game-theoretical model, the Pareto-optimal solution brings about peace through collective rationality. The collective rationality of the players and the dynamics of the conflict will be explained by the two and three players game in the following sections.

Preliminaries and Definitions in Game-Theory

Game Theory is a theory of conflict and cooperation, which normally involves players ranging from two to many.¹⁶ It is a strategic interaction among multiple players, where each player choose among multiple alternatives, in order to minimize or maximize *utility/benefits*.¹⁷ The theory was first propounded in the form of a duopoly by Antonie Cournot in 1838. In

¹⁴The Government promised the communities that ST status will be provided within a period of 100 days through their Manifesto.

¹⁵Interview with Pranjal Rajkhowa (11 September 2017); Interview with Kajol Gohain (12 September, 2017); Interview with Tarun Moran (11 September 2017); Interview with Pradip Roy (18 October 2017)

¹⁶Theodore L. Turocy and Bernhard Von Stangel, 'Game Theory', (2001) LSE-CDAM Research Report 4

¹⁷Ghurye above n 7

1928 John von Neumann developed the theory further and laid the foundation of zero-sum game.¹⁸ Von Neumann's work culminated in a fundamental book on game theory written in collaboration with Oskar Morgenstern entitled *Theory of Games and Economic Behavior*, 1944.¹⁹ It was John Nash who in 1950 further developed this theory to explain non-cooperative games.²⁰ The game-theoretical model consists of the zero sum game and non-zero sum game. In a zero-sum game, one player's gain is equivalent to another player's loss thus making the wealth or benefit to be zero. On the other hand, non-zero game model each player gains through a particular strategy and the net benefit doesn't amount to zero. Game theory thus is classified under two important heads, i.e. cooperative game theory and non-cooperative game theory.

- ♦ **Cooperative Game Theory:** It is based on the element of complete coalition in decision making, where players take the decisions collectively and with full trust to attain the maximum benefits possible.

- ♦ **Non-Cooperative Game Theory:** In this kind of game theoretical model, the objective decision of one player depends on the decision of another player, thereby curbing the independence in decision making in such a model.²¹ These kinds of models are popularly used in conflict situations, and are more common in economics than cooperative game theory.

Game-theoretical model consists of the following important elements-

- ♦ *Players* are the multiple individuals or the entities involved in the game
- ♦ *Payoff* is the ultimate benefit or utility derived from the strategic interaction.

- ♦ *Game* is a formal description of a strategic situation.

- ♦ *Game Theory* is a formal study of decision-making, where players have to make a choice which potentially affects the other players.

- ♦ *Pareto-Optimal Solution* is the situation where a player cannot obtain a higher payoff without hurting the other player,

¹⁸Thomas S. Ferguson, 'Game Theory', (UCLA 2014)

¹⁹Id at 4

²⁰Finite games have always had an equilibrium point, at which all players choose actions which are best for them given their opponents' choices.

²¹Supra at 7

◆ *Nash Equilibrium* is the point of equilibrium in a game where a player cannot deviate from.

◆ *Extensive Game* depicts the order in which each player make a move, and the information associated with the player at every decision point.

◆ *Zero-Sum Game* where the outcome of the game is zero.

◆ *Prisoner's Dilemma* is a standard example, where two rational individuals do not co-operate even if it is at their best interest to co-operate.

◆ *Strategy* is one of the given possible actions of a player.

◆ *Dominating strategy* is one where strategy of one player dominates the strategy of another.

Non-cooperative game theory branches out into two forms, one being the strategic game theory and the other being the extensive. The strategic form of game theory lists each player's strategies, and the outcomes that results from each other choices.²² In the extensive form of game theory model in non-cooperative game theory, the strategies are more detailed with more information on actions.²³ One of the most popular forms of strategic game is Prisoner's Dilemma, which derives its name from the famous example of two prisoners who strategically decides on their punishment. Citing the example-

Prisoner A and B are put into separate cells of a prison and have committed an offence where very little evidence is available against them. If both of them stay silent, then they would be convicted for a minor offence with one year sentence in the prison. If one of them reveals the truth, the other will be imprisoned for a term of four years and if they both speak up then they will be imprisoned for a term of three years. We use payoff of a, b, c, d where $a < b < c < d$

		Prisoner B	
		Stays Silent	Speaks Up
Prisoner A	Strategies		
	Stays Silent	(b,b)	(d,a)
	Speaks Up	(a,d)	(b,b)

Fig1.1- Prisoner's Dilemma

²²Theodore L. Turocy and Bernhard Von Stagel, Game Theory <www.cdam.lse.ac.uk/Reports/Files/cdam-2001-09.pdf>

²³Ibid at p.7

Another significant part of Game Theory is the Nash Equilibrium. According to Nash Equilibrium every single two-person game, non-zero sum game and zero sum game consist of an equilibrium point, which can be achieved through pure or mixed strategies. It was developed by John Nash in 1950, while developing his theory of non-cooperative games. In Nash Equilibrium, the players know each other strategy, and no player has anything to gain by changing their strategies unilaterally. In summation, each player bases their strategy on another to arrive at a best decision.

Prisoner's Dilemma Approach to Conflict-Resolution

♦ Demand for Scheduled Tribes Status and the Conflict for Identity

Rapport and Guyer (1966) have demonstrated the existence of 78 non-equivalent games in the logical structure of two-persons, two choice non-zero sum games.²⁴ Prisoner's Dilemma is one such part of the game-theory where each player has a dominating strategy, where one player has a better strategy than the other and where a point for negotiation exist for both the players known as the Pareto-optimal solution. It is the Pareto-optimal solution which has been applied in conflict models in order to reach a structure for peace. The application of Prisoner's Dilemma has been attempted at conflicts due to the strategic and logical outcome of such a theory. In majority of conflicts, the existence of more than two players makes it difficult to apply prisoner's dilemma for a feasible solution. In such conflict the evolutionary game theory is used to understand the strategic interactions between the multiple agents of the game. In the present conflict, only three most important players are taken into consideration i.e. the government, the six communities demanding for ST status and the existing tribal groups opposing the demand, and hence the conflict is examined through the conventional game theoretical model.

The conflict is explained with the help of 2*2 game theoretical model, 3*3 game theoretical model and critical risk theory. Every model used is an attempt to provide an alternative solution to the conflict in a situation where

²⁴Malvern Lumsden, 'The Cyprus Conflict as a Prisoner's Dilemma Game', (1973) 17 Journal of Conflict Resolution 1

a particular model does not work. The 2*2 model is used to arrive at a probable peace solution, while 3*3 models is used to understand the existence of an irrational player in the game. The application of the critical risk factor explains the reason behind conflicts continuing in a deadlock.

In the matrices mentioned below, the payoffs will be assigned as a,b,c,d and e and the order of it will be a<b<c<d<e for the rest of the examples in the paper.

♦ **The Demand or ST Status being a Non-Negotiable Game**

Assuming that the situation is non-negotiable, we try to bring about a modification in the matrix. Marvel Lumdsen in his game-theoretical model of Cyprus conflict explained several variables which can be applied in order to alter the matrix in a non-negotiable model of conflict.²⁵ In case of the Cyprus conflict, Marvel Lumdsen used variables such as time, decreasing the value of war, third-party intervention and in nullifying the prospect of a war.²⁶

In case of the demand for ST status, which we assume to be non-negotiable game, we assume two variables in order to alter the matrix, namely-time and intervention.

We assume in the present case that with time the values associated with the conflict will change, and new values will supersede the old ones.²⁷ The change in values of the conflict will lead to more cooperative behavior over a period of time. In this present conflict, it might happen that with time the government introduces schemes to socially integrate these communities in the mainstream Assamese society by providing them an equitable platform. The main demands of the six communities are political representation, educational reservations and land rights, for which the six communities demand ST status.²⁸ ST status is therefore considered as the most crucial step towards the fulfillment of their needs. With time this might change,

²⁵Ibid 18

²⁶Ibid 20

²⁷Lumdsen above n 26

²⁸Interview with Pranjal Rajkhowa (11 September 2017); Interview with Kajol Gohain (12 September, 2017); Interview with Tarun Moran (11 September 2017); Interview with Pradip Roy (18 October 2017)

and the communities might find an alternative to satisfy their social and economic needs, thus superseding the value attached with the demand for ST status. Another time-specific variable which might change the dynamics of the conflict is through the escalation of another conflict which might suppress this conflict for a period of time, allowing a cooling off period to bring about a resolution. A conflict of greater intensity might change the dynamics within the communities, where solidarity might increase for the new conflict rather than the one associated with the demand for ST status. This will alter the non-negotiable matrix, thus breaking the deadlock.

The second strategy in altering the matrix would be to allow third-party intervention in the issue, through an interlocutor or a mediator. Intervention can also be through an armed rebellion, but this would escalate the conflict, instead of arriving at a peaceful settlement. Lumdsen (1970) have mentioned that the 'stick' and 'carrot' approach by third parties are of no utility to parties in conflict. There are chances of the parties rebelling to third party interventions, rather than cooperating with it.²⁹ Deadlocks in conflicts are common and most of the time it is not mutual.³⁰ One party might associate itself with Prisoner's dilemma while the other with the deadlock structure. In such a case it would mean cooperation only for a single party, but if we look at the scenario as a whole it reflects a deadlock.³¹

Some games do not offer any kind of solutions and thus remain in a state of stalemate, and the player remains deadlocked until the game evolves.³² This happens when a deadlock occurs and the game becomes non-negotiable as discussed above, and gradually within a period of time the game evolves, i.e. the conflict evolves due to the 'time' variable. An illustration in this regard can be explained by giving an example of imposed party and imposing party.³³ A deadlock is imposed by one party which has

²⁹Lumdsen above n 26

³⁰Marc A. Levy, 'Mediation of Prisoners' Dilemma Conflicts and the Importance of the Cooperation Threshold: The Case of Namibia', (1985)29, *The Journal of Conflict Resolution* 4

³¹Ibid 583

³²Levy above n 32

³³Ibid 34

nothing to gain from this negotiation and uses negotiation as a delaying tactic in a conflict. Therefore, time acts as a valuable asset for the imposer. The use of negotiation as a delaying tactic in conflicts can be explained through an example of the six communities where the Government has sat down for several round of talks with an aim to negotiate.³⁴ The third party intervention in the form of mediator or an interlocutor is important in such a situation, which has been explained as an intervention for a non-negotiable game in the paper. In a classic prisoner's dilemma formulation we use four variables i.e. T, R, P, S which indicates temptation to compete, reward for cooperation, punishment for deadlock and sucker's payoff for cooperation respectively.³⁵ A situation of bully or prisoner's dilemma would occur in a conflict when a mediator intervenes. The party which imposes (imposer) the deadlock might change its strategy and reverse the P and R value, thus allowing the establishment of a prisoner's dilemma. On the other hand the party upon whom it has been imposed might try to change the P and S value, thus converting it into a bully, unable to afford the deadlock.³⁶

a. The Demand or ST Status being a Negotiable Game

One of the significant reasons behind the issue not reaching a feasible solution is the political parties' tendency to use it as a political agenda to thrive the conflict. The erstwhile as well as the present Government in Assam has used the grant of ST status in their election campaign to influence votes.³⁷ In 2014, Parliamentary elections and in 2016 Assam elections, the main agenda in the BJP campaign was to provide these communities with ST status.³⁸

In the present conflict, the order of preferences in a game-theoretical model would be to fulfill the demand for ST, secondly to fight over it and

³⁴This was expressed by almost all the leaders of the six communities who have set down on a series of negotiations with the Government both pre-elections and post-elections.

³⁵Levy above n 32

³⁶Ibid 583

³⁷Interview with Pranjal Rajkhowa (11 September 2017); Interview with Kajol Gohain (12 September, 2017); Interview with Tarun Moran (11 September 2017); Interview with Pradip Roi (18 October 2017)

³⁸Ibid

thirdly to suggest alternatives and come to a peaceful negotiation. In the first scenario, there are multiple layers which will prevent the communities from procuring the status that they are demanding. Firstly, according to evidences gathered from primary sources, one of the reasons behind not fulfilling the demand is political benefits attached to it. The Government, especially the political parties might want to continue the conflict in order to delay negotiations. In such a case, the Government will defect from a peaceful negotiation and thus decrease the payoff. If we consider this situation in a game theoretical model, we reach at the following Nash Equilibrium-

		6 COMMUNITIES	
		THRIVE	SOLVE
GOVERNMENT	THRIVE	(c,c)	(c,e)
	SOLVE	(e,c)	(e,e)

In the above case we have three Nash-Equilibrium i.e. (e,c), (c,e) and (e,e). In this particular situation it would be best for both the parties to negotiate and come to a peaceful settlement, which will generate a pay-off of (e,e). In this case, the best possible strategy for both the players would be to solve the conflict, instead of defecting or continuing the conflict for their own vested interests. Here, thriving the conflict proves more beneficial than arriving at a negotiated settlement. In order to propose peace in such a situation, we need to reach a strategy where the conflict can no longer be used to gain benefits out of it by the government or party in power through delaying tactics.

The demand for ST status for the six communities is met with oppositions from the other tribal groups, which makes the fulfillment of the demand difficult. The existing tribal groups are of the opinion that these six communities, if given the status of ST status would lead to a conflict, as such a step would corner the benefits of the existing groups. In support of such an opinion, they cite the example of the 1996 Ordinance, which conferred the status of ST upon the Koch-Rajbongshis, who have been demanding for ST status since 1967.³⁹ The Ordinance was effective for a

period of nine months and during that period the Koch Rajbongshis were able to garner majority seats in medical and engineering institutes in Assam, thus cornering the other tribal communities.⁴⁰ The second contention regarding such a demand is that the six communities do not fulfill any of the criteria mentioned by the Ministry of Tribal Affairs, and hence any step by the Government would require necessary precision in order to prevent the sabotage of the rights of the other groups. Thirdly, the contention against such a demand is based on wider discourse that if these communities receive ST status under the listed criteria, even though they fulfill none of them, this would encourage communities all over India to demand for ST status. In such a scenario the best possible strategy for the communities and the Government would be to agree that ST status demand is not feasible as it will affect the other communities both in Assam and whole of India. In order to bring the communities in conformity with the modalities, a new set of modalities was supposed to be released by the Singla Committee which was constituted by the Ministry of Home Affairs. The new set of modalities was supposed to be released by June 30, 2017, which did not reach any conclusion, as no such report was released.

In order to understand the best outcome, we depict the three situations in the form of 2*2 matrixes. The basic argument that is used in the matrices is that the political party in power benefits by delaying the conflict, and a Pareto-optimal solution is possible when they decide to agree with the stakeholder's demands. In the first situation we try to analyze the impact of fulfillment of the ST demand for both the Government and the six communities.

		SIX COMMUNITIES	
		FULFIL	IGNORE
GOVERNMENT	↑	FULFILL	IGNORE
		(e,e)	(d,c)
		(c,d)	(c,c)

³⁹Interview with Pradip Roy (18 October 2017)

⁴⁰'Tribal bodies oppose ST status to 6 groups', The Assam Tribune (online), 21 October, 2017 <<http://www.assamtribune.com/scripts/detailsnew.asp?id=aug0115/at052>>

In the figure above, the best strategy would be to fulfill the ST demand in order to bring the communities at peace. The best strategy here would be to agree on the fulfillment of the ST demand by both the parties. In case both the parties decide to defect, the pay-off comes down to (c,c) which would be the worst strategy in this conflict. In case the government defects, the pay-off comes down to (c,d) as the Government will not be able to benefit from such a strategy in a conflict. In the situation at the field, the delay in Government response has escalated the conflict in the form of strikes, and road blockades.⁴¹ The repeated promises and non-fulfillment of this demand has created ripples of dissatisfaction among the communities in Assam. Citing a recent example, the surrendered militant organizations of the Adivasi community organized a road blockade on 25 October, 2017 in the districts of Bongaigaon and Kokrajhar in order to reiterate their demand for ST status.⁴² A similar consequence was observed in July, when the Singla Committee could not decide on the issue within the stipulated deadline of June 30, 2017. Protests, strikes, rail and road blockades were observed all over Upper Assam and Lower Assam (particularly in Kokrajhara and Bongaigaon) as a consequence of the failure on the part of the Government to arrive at any concrete decision.

In an ideal situation, where the communities' demands get fulfilled, the next conflict that would arise as a consequence would be that by the existing tribal communities. The existing tribal communities under the banner of All Assam Tribal Sangha (CCTOA) have been opposing the demand by these six communities, as they believe that fulfillment of such a demand would tread upon the rights of the existing communities.⁴³ According to the Constitution of India, the reservation quota in India is fifty (50) per cent. In Assam the number of tribal communities stands at 23 with 14 hills tribes and 9 plain tribes. The percentage reserved for the hill tribes is 10 percent and for the plain tribes 5 percent. In case any new tribe is introduced in the existing ratio, the result of it would be an imbalance and quota dilution. In

⁴¹Rishu Kalantri, Protest over ST Status, The Telegraph (online), 30 October, 2017 <https://www.telegraphindia.com/1170702/jsp/northeast/story_159719.jsp>

⁴²Interview with Xabrias Khakha (18 October 2017)

⁴³Interview with Aditya Khaklary (28 August 2017)

such a situation, we use a matrix to understand the situation and to arrive at the optimal payoff

		SIX COMMUNITIES			
		COOPERATE	DEFECT		
EXISTING TRIBAL GROUPS	↑	COOPERATE	(e,e)	DEFECT	(d,c)
	↓	DEFECT	(c,d)	(c,c)	

In the figure above, the Nash Equilibrium of (e,e) is the ideal situation and the best strategy. But in a conflict where one party is in total opposition to the fulfillment of the demand, such a situation will not be feasible.

Even though the two matrices present the best strategies to bring the conflict to an end, it would not be possible in reality to apply these strategies. This is because of the dynamics involved in the conflict, which prevents it from arriving at a logical conclusion.

The third strategy that we can apply is to nullify the demand for ST status and to introduce an alternative for the communities to identify with. The alternative should be such that it accommodates the rights of both the existing tribal communities who are opposing this demand and the six communities. One such alternative would be to suggest a model of conflict resolution which would agglomerate multiple identities into one. Through the data collected from the field it was observed that one of the significant needs of the people was to arrive at definition of indigenous. The term indigenous has been debated from a long time, with different scholars providing different definitions for it. Under the international platform of United Nations, Special Rapporteur to United Nations Working Group on Indigenous People (UNWIP) Martinez Cobo presented a working definition for the term 'indigenous' ⁴⁴-

"Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that

⁴⁴Asia Pacific Forum, The United Nations Declaration on the Rights of Indigenous Peoples A Manual for National Human Rights Institutions, (2013)

developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system."

Due to the lack of a concrete definition of 'indigenous', different communities in India as well as in the other part of the world are struggling for identity assertion. In a situation where we provide the definition of indigenous and introduce development packages based on it, it might become easier to control the domino effect of conflict to some extent. Given a situation where we arrive at a definition of 'indigenous' for the people in Assam, and the definition encompasses almost all the existing, classes and communities in the region, the only need in such a situation would be provide the communities with developmental packages which addresses their needs. In such a situation where we place all the communities at a platform of equitable rights we will be able to control the inter-communities conflict to some extent. Representing this strategy in a matrix-

		SIX COMMUNITIES	
		AGREES	DISAGREE
GOVERNMENT	AGREES	(e,e)	(d,c)
	DISAGREES	(c,d)	(c,c)

In a situation where the inter-community conflict comes to a point of stagnation due to the similar benefits given to all, the conflict with the Government will also come to a standstill. The basic argument of the paper that ruling party in power thrives a conflict for their own interests will stand vitiated once the it is unable to instigate communities against each other. A situation of Pareto-optimal will be reached when on one hand the party in power is unable to profit from conflicts and in the other when the

communities end their conflicts with each other on the popular discourse of marginalization. We can thus resolve by i. Agreeing on the definition of 'indigenous' which will cater to all the communities in Assam; ii. Providing developmental packages based on the definition i.e. catering to their needs of education, political representation and land rights; iii. By decreasing inter-communities conflicts as a consequence of it and reducing the level of marginalization, by blocking the Government from utilizing issues of conflicts as a medium of fulfilling their interests.

♦ **Non-Cooperative Game-Theory and Three-Player Game**

In the above mentioned games, an effort was made to understand the conflicts through the interaction between two players, first between the six communities and government and second being the six communities and the existing ST groups. In the negotiable game, we tried to obtain a Pareto-optimal through the interaction, in order to arrive at a peaceful resolution with a higher payoff.

In case we apply a three-person prisoner's dilemma to this conflict we see that the payoff changes. This happens because two players gang up against the other player and thus resulting in a different payoff.

3*3 MATRIX		GOVERNMENT			
		Agrees		Disagrees	
		EXISTING ST COMMUNITIES		EXISTING ST COMMUNITIES	
		Agrees	Disagrees	Agrees	Disagrees
SIX COMMUNITIES	Agrees	(e,e,b)	(e,a,b)	(e,e,d)	(e,d,d)
	Disagrees	(b,e,e)	(b,d,d)	(e,e,d)	(c,c,d)

The non-cooperative game theory with three players brings out different outcomes compared to the two player game. In the two player game we explained the conflict through 2*2 matrices interaction i.e. the interaction between the Government and six communities and another interaction between the Government and the existing tribal communities.

The three player non-cooperative game would take all the three players together to understand the dynamics of the conflicts. We assume at the

outset that one of the players will be irrational, and they will obtain the maximum payoff by escalating the conflict. In such a situation, we will try to analyze the conflict in terms of a solution which will cater to the interests of all the three players.

In the first box, we accord a payoff of (e,e,-b) for the three players respectively. In this case we assume a negative payoff for the Government because if it agrees on the demand for ST status along with the other communities it might lead to another conflict. This is because of the introduction of the new six communities in the ST quota will dilute the reservation ratio. In the ideal scenario, an agreement between all the parties should have been the best outcome as it would have led to a Pareto-optimal solution, as explained in the 2*2 player game, but in this case this will escalate the conflict. In such a case, where one player gains less by assenting to a solution, the best possible solution would be to disagree, as the player is not earning a higher pay off by agreeing to the resolution structure.

Therefore, in the above matrix we see that the interaction between all the three players leads to a situation where one player will act irrationally, thus leading either to a low payoff or a negative payoff. In such a case we try to find a solution, even though it is difficult to find one due to the existence of dominant solutions in each box. The best way to find out a solution would be to arrive at a Nash Equilibrium for this simultaneous game, where all the three players are moving at the same time. In this case we hold everyone's payoff as constant and try to find out whether the players would like to change their positions. In case the answer is in negative, then we can arrive at a pure strategy Nash equilibrium.

3*3 MATRIX		GOVERNMENT			
		Agrees		Disagrees	
		EXISTING ST COMMUNITIES		EXISTING ST COMMUNITIES	
		Agrees	Disagrees	Agrees	Disagrees
SIX COMMUNITIES	Agrees	(e,e,-b)	(e,a,b)	(e,e,d)	(e,d,d)
	Disagrees	(b,e,e)	(b,d,d)	(e,e,d)	(d,d,d)

In the highlighted box (in red), we will try to understand whether the six communities will be better off in agreeing to the question of ST demand or in disagreeing. In the second box the ST communities receives a payoff of (-b) and in the first box it receives a payoff of (e). Therefore, we try to answer the question of whether the six communities would like to change their position for a better payoff. The answer is certainly in affirmative, as the player would try to obtain the maximum utility through their strategy. Similarly, we try to find out the payoff for the existing tribal communities, holding the actions of the other players constant. In this case, the existing tribal communities will receive a payoff of (e) on agreeing and (-a) on disagreeing in the first box. Therefore, they would prefer to change their position rather than remaining constant. Therefore, we cannot establish a pure strategy Nash equilibrium in this case. The next step would be to establish the payoffs for the Government, holding the actions of the other players constant. In the box (in green), we see that the Government would not want to decrease its payoff of (1) to (-1) and would therefore resort to a situation of pure strategy Nash equilibrium. But a pure strategy Nash equilibrium can be established only when all the players are satisfied with their payoffs and decides to remain at their constant positions.

Now we try to analyze the highlighted box (in blue). In this case, we see that the six communities would be better off in agreeing than disagreeing, as the utility derived would be more in former than the latter. Therefore, even in this case we are not able to arrive at a pure strategy Nash equilibrium.

Therefore, the possibility of arriving at a pure strategy Nash equilibrium is not possible in this case. In such a case where Pareto-optimal solution is not possible, we try to provide a solution which will help in ending the conflict to some extent.

As explained in the 2*2 matrix game theoretical model, the identification of every individual under the umbrella term of 'indigenous' would be the optimal solution in obtaining a pure strategy Nash Equilibrium, as it would provide all the three parties the reason of equitable benefits. Moreover, the Government's inability to solve the conflict due to supervening difficulty will be reduced to some extent if the other two players are put on the same level. Moreover, the political parties' ability to derive economic benefits out

of a conflict will be reduced once the inter-community marginalization ends, and the two communities in conflict agree to a solution from which they would be unwilling to deviate, thus establishing a pure strategy Nash equilibrium.

Critical Risk Factor

In case we apply the non-cooperative three-players game theory to the conflict, we see that one player fails to be rational, and gain more payoffs by escalating the conflict. In the above cited example of the non-cooperative three player game, the existing communities gain more by defecting i.e. in escalating the conflict. In such cases, a Pareto-optimal solution cannot be arrived at as one of the player refuse to agree with a peaceful resolution. Therefore, another method of looking at the conflict would be to analyze it through the lens of Chicken's Game and Critical Risk Factor. These two concepts were introduced by Snyder and Diesing (1970), where critical risk was defined as the amount of unfavorable outcome that the parties will endure.⁴⁵ The critical risk factor places the party in a situation, where they would try to obtain a favorable outcome beyond the critical risk threshold. This was explained by Sydnor and Diesing through the formula of

$Critical Risk = (T-S)/(T-P)$, where we use the blackmail illustration to explain the formula. Here, more a blackmailer threatens punishment (P) greater than the ransom (S), there are greater chances that the victim will prevent itself from going against the opponent.⁴⁶ This kind of a game is called either bully or chicken game. There is a greater probability of such a game taking place if the threat exceeds the critical risk, where one party has to give in due to the threat posed by another. As explained by Marc A. Levy, if the risk of standing firm falls below the critical risk, there are higher chances of the parties standing firm and continuing the conflict. While on the other hand, if the risk is above the critical risk, the parties will prefer to give in.⁴⁷ such as situation can be observed in the conflict

⁴⁵Levy above n 32

⁴⁶P and S are cardinal numbers explained by Sydnor and Deising

⁴⁷Supra at 34

discussed in this paper. In a situation of prisoner's dilemma, the critical risk i.e. the endurance of the parties towards an unfavourable situation will be more than 100 percent, and hence the parties will prefer not submitting to the threat.

Even though Prisoner's Dilemma presents a solution to the deadlock in the present conflict, we might face a situation where the payoffs for competing is more than cooperating as explained by Ellsberg (1975), where⁴⁸ -

Critical Risk= $(T-R)/(T-P)$, where we take P the payoff for standing firm and S as the cost of not resisting the opponent i.e. the yield. According to Ellsberg, the cooperative payoff the player wish to achieve must exceed the value of the outcome that they wish to achieve. If the payoff of cooperation is lesser than their expectation, there are chances of the players remaining firm in their stand of non-cooperation.⁴⁹

Therefore, in conflicts the critical risk factor can be applied in strategically understanding the dynamics of conflict. While a classical Prisoner's Dilemma provides resolution with a space for peace, the critical risk factor provides an area where the varied dynamics of conflict can be analyzed to understand why conflicts continue in a deadlock, the primary reason being the weighing of options on defection and cooperation.

Conclusion

In the conflict analyzed in the paper, both the parties seem to be in a situation of Prisoner's Dilemma. The Pareto-optimal solution in the form of a widely accepted definition of 'indigenous' is being presented as a viable resolution in the present conflict. As discussed above, the base argument for the conflict rests upon the benefits that the Government gains by being a stakeholder in the conflict and in delaying it. Basing the strategies on this argument, a resolution can be arrived at through a proper negotiation, where each party agrees to come to a mutual understanding. Here, the Pareto-optimal is explained through three situations-

1. In the first situation the deadlock can end if both parties agree to sit down and solve the problem

⁴⁸Id 584

⁴⁹Id 585

2. The second situation would demand cooperation from both the Government and existing communities, who are important stakeholders in the conflict

3. In the last situation, the Pareto-optimal solution is achieved by agreeing to a unified definition of 'indigenous' in order to bring about inclusive developmental packages for the equitable upliftment of the communities in Assam.

The third strategy of resolution provides a feasible solution as this will bring down the demands from communities in future for ST status due to Government's negligence and inter-community marginalization.

The only way out of a conflict is to allow the cooperative payoff to be greater than the payoff that the parties will receive by standing firm. Thus, in case of conflicts in Assam, which are intertwined with the issues of land and identity, scattered developmental packages will not be feasible, as the cooperative payoff would be less than expected. Thus, a solution has to be reached where either the unfavourable outcome for the communities to endure is greater than the threat posed or where the payoff through cooperation is higher than the outcome that they expect.⁵⁰ The three player game provides us with a conclusion that such a game will always consist of a player who will be irrational, and therefore, the game will never reach a logical conclusion. The critical risk factor comes into play in such a case, not in providing a solution but in explaining the reason behind deadlocks in conflict, and in understanding dynamic interactions between players.

Keeping aside the theoretical perspective of game-theory, an attempt is being made towards bringing about constitutional safeguards for the people in the state. The task of etching out the constitutional safeguards is arduous, thus leaving the great legal minds to ponder about it. The consequences and the maximum utility of such an effort can only be examined, once the safeguards are being announced. Moreover, deviating from the theoretical model also help us to arrive at the same conclusion of ascribing a tangible definition of term 'indigenous' and the distribution of developmental packages related to it.

⁵⁰Levy above n 32