Constituencies and Recruitment Pools: A Network Analysis of Militant Group Cooperation and Infighting

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Abstract

Existing accounts suggest that shared civilian constituencies have both cooperation- and conflict-inducing effects on inter-group militant relations. I develop a theoretical framework to explain inter-group cooperation and infighting simultaneously. I propose a conceptual distinction between shared constituencies and competition over the social support bases that serve as militant recruitment pools. Drawing on theories of the social origins of armed actors, I hypothesize that competition over recruits moderates the impact of shared constituencies on inter-group relations. I test my expectations using social network analysis tools -TERGMs- on a novel database of 53 Northeast Indian militant groups between 1981-2021. I find that groups with shared constituencies are likely to cooperate if they can differentiate their recruitment pools, whereas those that rely on the same social networks for recruitment are likely to fight. My findings have vast implications for how scholars study competition in complex multiparty conflict environments.

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Introduction

Since 2012, the Syrian War has illustrated the devastating impact that cooperation and infighting among nonstate armed actors can have on human suffering. Shifting alliances among various rebel factions have not only steered the course of the conflict[1] but have also precipitated significant loss of life, with inter-militant group clashes causing over 47,000 deaths[2]. Similar dynamics have unfolded in conflicts in India, Myanmar, Afghanistan, Nigeria, Chad, Sudan, Democratic Republic of Congo, among others, reflecting a broader, global trend of increased fragmentation of opposition movements, the proliferation of nonstate armed actors, and the rise of multiparty conflicts[3].

The rationale behind alliances and infighting among militant groups is simple: groups with similar goals collaborate to aggregate their collective capabilities[4] while competing to secure a larger share of resources and civilian support in shared violent political markets[5]. Yet, this logic involves an inherent dilemma: Groups within the same opposition movement have clear incentives to cooperate, as joint efforts will increase chances of achieving shared goals. But, these same groups strive to appeal to the same civilian constituency (e.g., ethnic, tribal, identity, or ideological groups on whose behalf militants claim to fight), forcing them into competition for loyalty, recruits, and resources. The very factors that make cooperation fruitful—shared constituencies and aligned objectives—may set the stage for rivalry.

Unfortunately, our scholarly study of inter-group militant cooperation and infighting has yet to elucidate this dilemma. Though some scholars emphasize the cooperation-inducing effects of shared constituencies[6], others highlight their role in fueling conflict[7], with empirical evidence supporting both perspectives. However, much of the literature examines cooperation and infighting in isolation, overlooking the underlying competitive tensions that can destabilize alliances[8]. Moreover, there exists conceptual ambiguity concerning the *nature* of competition over shared constituencies—whether it is driven by aspirations for political/ideological dominance[9] or by the contestation for material resources[10], with some studies distinguishing between the two and oth-

[1](Gade et al. 2019)
[2](Davies, Pettersson and Öberg 2022)
[3](Cunningham, Bakke and Seymour 2012; Bakke, Cunningham and Seymour 2012; Seymour, Bakke and Cunningham 2016; Otto 2018; Mosinger 2018; Farrell 2020; Blair et al. 2022; Malone 2022; Lewis 2023)
[4](Christia 2012, p. 240)
[5](Gade, Hafez and Gabbay 2019; Hafez 2020)
[6](Bapat and Bond 2012; Asal et al. 2016; Bacon 2017; Gade et al. 2019; Blair et al. 2022; Balcells, Chen and Pischedda 2022)
[7](Lilja and Hultman 2011; Fjelde and Nilsson 2012; Pischedda 2018; Phillips 2019; Pischedda 2020)
[8](Tan and Wang 2010; Zeigler 2016; Niou and Zeigler 2019)
[9](Lilja and Hultman 2011; Phillips 2015; Krause 2017; Conrad and Spaniel 2021)
[10](Fjelde and Nilsson 2012; Nygård and Weintraub 2015)

ers treating them as complementary factors[11]. This unresolved scholarly debate on militant constituency politics and contradictory evidence warrant closer scrutiny to bridge conceptual divides and uncover the mechanisms through which constituencies shape inter-group relations.

To this end, this article introduces the first theoretical framework that explains how constituencies simultaneously shape both cooperation and infighting, and rigorously tests these claims using fine-grained original data. Extending social ties and networks-centric theories of collective action, mobilization, and rebellion[12], we differentiate between broader shared constituencies and the more specific social support bases. While a constituency consists of potential sympathizers who may attitudinally support a militant group based on broad identity ties, social support bases offer direct behavioral support to rebellion by supplying militants with combatant recruits. A shared constituency between groups should not be conflated with competition over support bases, as two groups appealing to the same broad ethnic/religious/ideological category may remain embedded in distinct social networks that function as separate recruitment pools.

These constituency politics generate distinct strategic trade-offs for militant groups. By lowering the costs of cooperation—through fostering a collective inter-group identity, extending the shadow of the future, and legitimizing alliances in the eyes of the constituency—shared constituencies facilitate inter-group cooperation. Accordingly, groups that appeal to the same broad constituency but draw from distinct recruitment pools prioritize the capability-aggregation benefits of cooperation. However, as competition over recruitment pools intensifies, threatening organizational survival as independent actors by restricting mobilization capacity, shared constituencies no longer guarantee cooperation. Instead, groups compensate for recruitment vulnerabilities by engaging in preemptive strikes against rivals, trading off the capability-aggregation benefits of alliances for strategic infighting to secure access to a limited pool of recruits—an essential resource for maintaining organizational viability. This theory offers a solution to the aforementioned constituency-centric dilemma: groups with shared constituencies but distinct recruitment pools maintain alliances, while those competing for the same recruitment base engage in conflict.

This theory emphasizes the *nature* of competition over constituencies as a key mechanism shaping inter-group relations. By moving beyond broad characterizations that treat the entirety of militant constituencies as potential social support bases, our conceptual advancement—*recruitment pools*—offers new insights into how constituency politics shape inter-group relations. The theory also offers a novel explanation for contradictory findings in the literature by explicitly explaining why shared constituencies sometimes foster alliances and other times fuel infighting. Only by disaggregating the effects of shared constituencies from recruitment-based competition—a distinct

[11](Wood and Kathman 2015; Pischedda 2018)

[12](Olson 1965; McAdam, McCarthy and Zald 1996; McAdam, Tarrow and Tilly 2001; Siegel 2009; Staniland 2012; Parkinson 2013; Staniland 2014; Shesterinina 2016; Lewis 2017; Larson and Lewis 2018; Edgerton 2022; Nussio 2024)

dimension of constituency politics—can we fully explain these divergent outcomes.

We test this theory in the context of multiparty conflicts in Northeast India, an ideal case due to its highly fragmented insurgent landscape. Multiple militant groups in the region claim to represent the same broad ethnic, religious, or linguistic constituencies, yet many recruit from distinct tribal or subethnic networks, providing natural variation in recruitment pools. Northeast India also exhibits both cooperation and infighting among insurgent groups, making it particularly well-suited for examining the predictions of the theory. Beyond the regional context, Northeast India's conflicts represent classic cases of protracted, identity-driven, multiparty insurgencies, making them broadly comparable to other active conflict zones in South and Southeast Asia (e.g., Pakistan, Myanmar, the Philippines, Malaysia, Indonesia), with broader implications for militant competition and cooperation in other regions, including Latin America, the Middle East, and sub-Saharan Africa.

We draw on an original temporal network dataset capturing cooperative and adversarial relations among 53 Northeast Indian militant groups from 1981 to 2021. This dataset documents nearly twice as many groups as publicly available databases while providing fine-grained temporal data on the onset and termination of inter-group cooperation and conflict over four decades. Unlike existing datasets, which tend to focus only on highly lethal groups and temporally aggregate inter-group ties, ours offers a more detailed account of the dynamics in question. In addition to mapping overlapping constituencies, the dataset introduces a novel measure of competition over recruitment pools: *militant defections across groups*, tracking when combatants from one group defect to another. Rich original data on groups' shared territorial presence, non-militarized territorial disputes, public rhetorical alignment, foreign state support, and military capacity—along with social network analysis tools (e.g., Temporal Exponential Random Graph Models) designed to account for network dependencies such as popularity and transitivity in alliance and rivalry formation—help address several threats to inference.

In line with the theory, we find that shared constituencies generally facilitate cooperation among militant groups, particularly when they draw from distinct recruitment pools. However, when groups with shared constituencies rely on the same recruitment sources, the likelihood of infighting increases significantly. This supports the argument that constituency politics have divergent effects on inter-group relations, depending on the nature of competition over civilian support. Cooperation is most likely when groups share a broad constituency but maintain separate recruitment networks, whereas conflict is most pronounced when shared constituencies overlap with shared recruitment pools. While broad constituency overlaps may create opportunities for ideological or political contestation within a fragmented opposition movement, they also reduce the costs of cooperation and enhance the benefits of capability aggregation. In contrast, direct competition for material resources—particularly recruitment-based competition, which threatens

organizational survival by limiting mobilization capacity—drives conflict among groups that share a constituency. These results remain robust after accounting for homophily (the tendency of actors to form ties with similar others), popularity effects (the tendency to form ties with well-connected actors), transitivity effects (the tendency to form ties with the friend of a friend or the enemy of an enemy), multiple measures of constituency and recruitment pool overlaps, and different network modeling approaches.

Overall, this study makes several important contributions. By distinguishing between broader constituencies and the more specific social support bases, we problematize several assumptions in existing work about the fixed character of militant constituencies. Prominent studies on inter-militant group relations conflate broad constituencies with active support bases, treating potential civilian support for rebellion as uniformly distributed across the entire constituency rather than recognizing the distinction between the attitudinal sympathy that broad constituencies may be predisposed to have and the direct behavioral support that most militant groups can derive only from specific support bases. While some recent work recognizes the diverse nature of militant constituencies[13], it primarily focuses on civilian victimization behavior. Given the increasingly fragmented nature of civil conflicts, constituency politics also plays a crucial role in shaping alliances and rivalries during conflict. This contribution directly informs the scholarly debate on winning hearts and minds in insurgency and counterinsurgency[14], raising the question: whose hearts and minds are being won—attitudinal supporters or behavioral supporters of rebellion?

This study also provides new empirical evidence for social ties and network-centric models of conflict, which emphasize how social origins and wartime networks shape the future trajectories of armed actors[15]. Our analysis contributes to this burgeoning literature by demonstrating that networks of rebellion influence not only the intra-organizational dynamics of armed groups and their tactical choices but also how they engage with other armed groups. Meanwhile, while Braithwaite and Cunningham (2020) provided data on the social origins of armed groups before their emergence, quantitative scholars of conflict still lack data on wartime social networks due to their clandestine nature. To this end, our proxy measure of recruitment pools—based on defections across groups—offers a starting point for future research to build upon.

Finally, the Internet has transformed how social movements are marketed and mobilized, allowing contentious actors to conduct public diplomacy campaigns on social media that transcend physical boundaries. A growing body of literature explores how digital interconnectedness facilitates the diffusion of contentious politics, enabling groups to engage global audiences and attract supporters across diverse geographic regions[16]. As militant groups increasingly leverage

[13](Ottmann 2017; Polo and González 2020; Onder 2024)
[14](Lyall, Blair and Imai 2013; Hirose, Imai and Lyall 2017)
[15](Staniland 2012; Parkinson 2013; Sarbahi 2014; Staniland 2014; Lewis 2017; Larson and Lewis 2018)
[16](Zeitzoff 2017; Steinert-Threlkeld 2017; Larson et al. 2019; Gohdes 2020; Bestvater and Loyle 2023; Walter and

online platforms to expand their constituencies beyond territorial constraints, our distinction between broad constituencies (attitudinal support) and specific recruitment pools (behavioral support) becomes even more critical. This raises questions about the strategic use of social media for mobilization—potentially challenging the premise that social media is a potent tool for instigating costly mobilization—the extent to which online support bases influence or reflect offline recruitment dynamics, and how groups competing for the same digital audience engage in online rivalries, propaganda wars, or cyber-attacks to assert dominance in the digital space.

Constituency, Support Base, and Recruitment Pool

The existing literature suffers from conceptual ambiguity regarding the *nature* of competition over constituencies. Much of the scholarship on militant alliances and rivalries assumes that competition is primarily driven by groups' aspirations for ideological or political domination within their shared ethnic, religious, or ideological constituency. Scholars argue that ideological contestation matters because militants rely on civilian support to sustain their operations, and shifts in allegiance among constituency members can deprive groups of their social support base, from which they derive essential resources, including recruits[17]. However, this approach tends to treat the entire constituency as a homogeneous support structure for militancy, overlooking important differences in the mobilization capacity of different social segments within the broader constituency.

A central argument of this study is that shared constituencies do not necessarily equate to shared recruitment pools. While an ethnic, religious, or ideological constituency may provide attitudinal support to militant organizations, only a small fraction of the constituency actively contributes resources to militancy. Most constituency members either hold weak political preferences[18] or avoid involvement in militancy due to the risks associated with rebellion[19]. More importantly, broad identity categories alone are insufficient for understanding social support bases of militancy; not every civilian dissatisfied with the government is equally likely to participate in or aid rebellion[20].

Inclination towards participating in or aiding militancy is primarily shaped by one's social networks rather than broad identity affiliation. Social networks are central to high-risk collective action[21] because they facilitate trust-based mobilization and reduce the costs of recruitment[22]. Accordingly, militant groups do not recruit randomly from the entire constituency they claim to represent but instead draw from specific recruitment pools—social networks where personal, com-

Phillips 2024)

[17](Wood and Kathman 2015; Pischedda 2020)

[18](Lichbach 1995; Kalyvas 2006)

[19](Mosinger 2018)

[20](Humphreys and Weinstein 2008)

[21](Centola and Macy 2007; Siegel 2009)

[22](McAdam, Tarrow and Tilly 2001; Seymour 2014)

munal, or institutional ties facilitate mobilization[23].

These pools can take multiple forms, varying across different conflict contexts—ranging from tribal and clan-based affiliations to kinship and familial networks, religious organizations, student movements, labor unions, and paramilitary militias. In ethnically segmented societies, militants often recruit from specific clans, tribes, or kinship networks rather than from the entire ethnic group. In Northeast India, for example, KLNLF and PDCK both claim to represent the Karbi people; however, their recruitment bases are rooted in distinct tribal networks. The leader of PDCK, Ingti Kathar Songbijit, belong to the Engti clan of Karbis[24], whereas KLNLF's chairman, Pradip Terang, is from the Terang clan[25]. As a result, KLNLF draws recruits from the Terang clan, while PDCK primarily mobilizes from the Engti clan. These tribal divisions function as distinct recruitment pools, shaping group membership and social support structures.

Similar dynamics are observed in conflicts where family and kinship-based networks serve as recruitment pools. Militancy often spreads within extended families, where trust and loyalty reduce the risk of defection or infiltration. In her study of Palestinian militancy in 1980s Lebanon, Parkinson (2013) finds that Fatah, the PFLP, and the DFLP recruited among the same familial and quotidian social circles, illustrating how shared constituencies can still lead to overlapping recruitment pools.

Other militant groups rely on student organizations, labor unions, and professional networks as their recruitment base. The Kurdistan Workers' Party (PKK) in Turkey, for instance, originated within a small group of Kurdish university students in Ankara, leveraging these student networks as its initial recruitment pool before expanding into kinship-based mobilization[26]. As a result, despite its claim to represent the broader Kurdish constituency, the PKK's recruitment was geographically concentrated in specific provinces[27]. In Colombia, militias affiliated with the FARC relied heavily on the urban networks of left-wing political organizations for recruitment purposes in addition to the group's rural base[28]. Likewise, in religiously motivated conflicts, recruitment pools often emerge from sectarian institutions, such as madrassas and clerical networks. Many Southeast Asian jihadist groups, despite claiming to represent Muslims broadly, recruit from a small subset of radical madrassas, such as Jemaah Islamiyah's reliance on religious schools like al-Mukmin, Lukman al-Hakiem, and al-Islam in Indonesia and Malaysia[29].

Despite being driven by different kinds of social ties, what unites these varied forms of recruitment pools is their role as high-risk mobilization hubs, where militants can draw upon pre-existing

[23](Parkinson 2013; Sarbahi 2014)
[24](Talukdar 2016)
[25](South Asia Terrorism Portal 2024)
[26](Aydin and Emrence 2015)
[27](Tezcur 2016)
[28](Immigration and Refugee Board of Canada 2008)
[29](Magouirk 2008)

relationships to lower recruitment costs. Unlike a broad ethnic or religious constituency, which is often geographically dispersed and politically heterogeneous, recruitment pools tend to be localized and limited to a small subset of the constituency a given militant group claims to represent.

This conceptual distinction is visualized in Figure 1, where the larger circles represent the constituency groups, squares represent the recruitment pools within constituency groups, and smaller circles represent the militant groups embedded in their respective recruitment pools. Militant groups X, Y, and Z all claim to represent Constituency A, whereas militant group Q represents Constituency B. However, among the three militant groups in Constituency A, militant group Z draws from a separate recruitment pool, while militant groups X and Y compete for the same recruitment base.

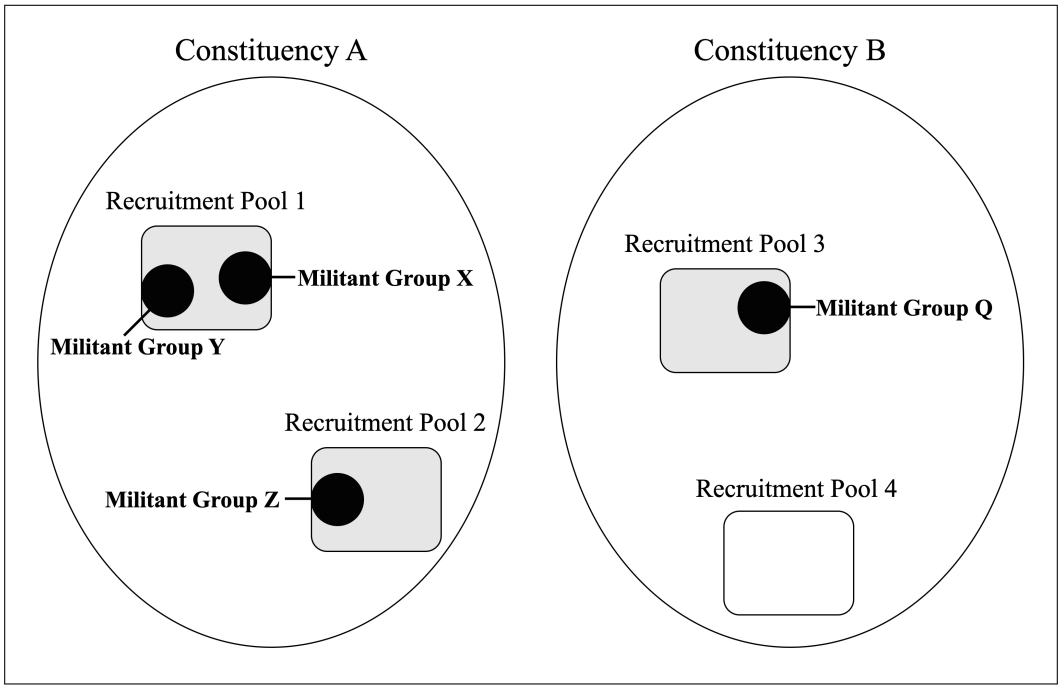


Figure 1. Constituency vs Recruitment Pool

Accordingly, militant groups with shared constituencies may or may not draw on the same recruitment base. The KLNLF and PDCK in Northeast India illustrate how groups with aligned ideological goals and a common ethnic constituency can remain embedded in distinct social support networks, mitigating direct competition over recruits. By contrast, the case of Fatah, the PFLP, and the DFLP in Palestine exemplifies how militant groups that share a broader constituency can also share a common recruitment base.

While recruitment pools are often inherited from pre-existing social networks, multiple pathways can lead to their divergence. One such pathway is leadership-driven factionalism, where internal disputes over strategy, leadership succession, or ideology result in breakaway factions

that establish distinct recruitment networks rather than drawing from the original group's support base. Another pathway stems from geographical dispersion, as militant organizations that expand or relocate across different regions become embedded in localized social structures, leading to the gradual differentiation of their recruitment bases. Operational specialization can also contribute to recruitment pool divergence, where groups adopt distinct combat strategies—such as urban guerrilla warfare versus rural insurgency—drawing recruits from social environments that align with their tactical needs.

While recruitment pools are often historically determined and resistant to rapid change, there are conditions under which they may expand or contract. The Kurdish ethnonationalist group PKK's efforts to broaden its recruitment beyond its original social base, for instance, proved ineffective when it attempted to mobilize Alevite-Kurdish populations in Sivas but failed to secure meaningful recruitment[30]. As Staniland (2012) notes, "militants go to war with the networks they have" (p. 150). However, external shocks—including government repression, counterinsurgency efforts, and militant propaganda campaigns—can disrupt or expand recruitment pools. State retaliation against a militant group's broader constituency, for example, may radicalize previously neutral civilians, pushing them closer to militancy and enlarging the group's recruitment base[31].

This study does not seek to explain why recruitment pools emerge, persist, or shift; rather, it focuses on their consequences—specifically, how the presence or absence of overlapping recruitment pools explains patterns of cooperation and conflict among militant groups. By clarifying the impact of divergent nature of competition, this framework offers a new perspective on how constituency politics shape inter-group relations.

Logic of Inter-Group Cooperation and Infighting in Multiparty Conflicts

I theorize that groups with a shared constituency have vast incentives to cooperate because shared constituencies lower the costs of cooperation by promoting collective identity, lengthening the shadow of the future, and justifying the alliance in the eyes of the constituency. Conversely, groups with a shared constituency that compete over recruits have incentives to fight each other to ensure their survival because shared recruitment pools can deprive one of its mobilization capacity and limit the chances of military and political success.

First, groups with shared constituencies claim to fight for the fate of the same polity. This shared vision can expedite collective identity formation by aiding prospective partners to con-

[30](Aydin and Emrence 2015)
[31](Findley and Young 2012)

verge their militant identities and conflict frames[32]. Collective identity orients militants toward shared goals, fosters inter-group cohesion, and aids battlefield performance[33]. In addition, potential foreign state supporters of militant groups may favor cooperation between groups with shared constituencies for the same reasons. Foreign actors may be more inclined to support unified coalitions that can efficiently carry out orders and monitor military activities[34]. Groups with shared constituencies can more easily form a collective inter-group identity relying on their shared conception of ideal polity, which will help them forge cooperative relations consisting of cohesion, adherence to collective goals, and improved battlefield performance.

Secondly, groups with shared constituencies appeal to the same polity whose members likely frequently socialize with each other. If allied partners abruptly abrogate the cooperation or fail to honor the terms of their partnership in any other way, news of 'betrayal' can be circulated within the constituency, undermining the group's reputation[35]. In that sense, shared constituencies enhance the shadow of the future by creating reputational incentives, thereby helping groups make credible commitments to their inter-group partnerships. This raises the question of why groups with shared constituencies do not simply merge despite being able to commit credibly to each other. Yet, mergers implicate uncertainty on the part of the fate of militant leaders. For a group merger to happen, leaders of various groups must negotiate role distribution and divide authority within the merged group. Given leaders' incentives to avoid being ousted from power[36], merger is a less viable alternative to inter-group cooperation, which allows groups to exist independently and leaders to remain in positions of authority in their respective groups.

Finally, militant groups' choices regarding inter-group relations are informed by their constituency's response to prospective allies[37]. Forging cooperative ties with a group considered unfriendly by one's constituency can risk losing the constituency's support. Furthermore, allies can take actions that are unacceptable to the group's constituency, such as victimizing civilians or surrendering to the government[38]. For these reasons, groups may avoid allying with groups that their constituency may object to. Shared constituencies can make inter-group cooperation appealing as civilian constituencies are likely more receptive to cooperation between two groups that claim to represent them. Moreover, civilian constituencies may demand cooperation between various groups that claim to represent them as a way of uniting and solidifying their community against "out-groups". In that sense, cooperation between a set of groups that appeal to Constituency A may facilitate the formation of cooperation between another set of groups that appeal to Constituency

[32](Bacon 2018)
[33](Gutiérrez Sanín and Wood 2014; Oppenheim et al. 2015; Hoover Green 2016)
[34](Salehyan, Gleditsch and Cunningham 2011)
[35](Blair et al. 2022)
[36](Prorok 2015)
[37](Bacon 2018)
[38](Bacon 2017)

B by creating pressures to contain, balance, or counter the influence of an outgroup[39].

So far, my theoretical discussion has focused on the positive incentives that motivate groups with shared constituencies to forge inter-group cooperation. Yet, the prominence of scholarly work focusing on why cooperation can be costly necessitates considering the negative incentives in conjunction with positive incentives. Despite the benefits shared constituencies offer to prospective alliance partners, alliance collapse remains a risky possibility[40]. In anticipation of a future alliance collapse, militant groups are incentivized to ensure their survival beyond the duration of the alliance because survival beyond the duration of the alliance has significant military and political consequences[41]. I argue that the impact of shared constituencies on groups' likelihood of cooperating is conditional on whether they recruit from the same pool of prospective militants because shared recruitment pools threaten groups' survival and post-war political pay-offs.

First, militant groups must facilitate a flow of recruits to sustain their military activity. Facing competition over its recruitment pool can eliminate one's chances of military success. The prospects for military success increase when militant groups can increase their military capacity by effectively mobilizing a large number of recruits[42]. If groups are deprived of recruits due to other groups' preying on the same recruitment pool, their long-term survival is threatened, and future chances of military success are considerably reduced.

Secondly, groups need to stay mobilized to enter negotiations and extract concessions from the government[43]. The ability to extract concessions also increases with group strength[44] because the government has little incentive to offer settlements to weaker groups[45]. Facing competition over its recruitment pool may diminish one's resource mobilization capacity and undermine its strength, limiting its leverage vis-à-vis the government. In addition, shared recruitment pools can make groups more vulnerable to the state's "divide and rule" tactics before or during negotiations[46]. State policies devised to cultivate divisions within militant movements may trigger the emergence of splinter factions that prey on their parent organization's recruitment pool. In other words, splinter factions may emerge for the sole purpose of fighting their parent organization, thereby hindering the prospects for inter-group cooperation and sowing the seeds of infighting within a given militant movement.

Third, preserving one's mobilization capacity is desirable for maximizing one's political relevance in the post-war order by acquiring concessions that grant them certain rights and power-

[39](Beiser-McGrath and Metternich 2021)
[40](Zeigler 2016)
[41](Metternich and Wucherpfennig 2019)
[42](Cunningham, Gleditsch and Salehyan 2009; Nygård and Weintraub 2015)
[43](Thomas 2014)
[44](Nygård and Weintraub 2015)
[45](Cunningham, Gleditsch and Salehyan 2009)
[46](Nilsson 2010)

sharing authority[47]. Groups' strength and ability to impose a 'mutually hurting stalemate' may increase their chances of securing power-sharing[48]. Thus, groups deprived of their resource mobilization capacity due to competition over their recruitment pool may lose their chances of securing political office and authority after the war. Group leaders' concerns over securing personal power in the post-war order could be another reason why groups should avoid cooperating with others that draw on the same recruitment pool. Cooperating with other militant leaders who can potentially 'steal away' one's recruits risks losing one's personal status, political influence, material benefits, and prospects for assuming positions in the national army command in the post-war period[49].

Finally, it is noteworthy to acknowledge that group leaders may also be motivated by material gains. Some groups generate significant revenues from natural resource extraction, drug trafficking, extortion, or other illicit economies[50]. Groups should be motivated to keep mobilized and facilitate flows of recruits to sustain generating revenues, which is why even groups that do not have big political agendas or military ambitions have incentives to preserve and protect their recruitment pools from potential competitors.

For the aforementioned reasons, groups are incentivized to preserve the primary social base that serves as their recruitment pool and makes up the bulk of their mobilization capacity. If one's alliance partner is in a position to prey on one's recruitment pool, inter-group cooperation can threaten one's survival. The theoretical discussion suggests that groups without shared constituencies are unlikely to establish cooperation because of a lack of collective identity and commitment problems. On the other hand, they are not prone to infighting either because they do not compete over the channels that form militants' resource mobilization capacity. Thus;

> Hypothesis 1: Pairs of groups with no shared constituency are less likely than those with shared constituencies to engage with each other.

In contrast, groups that share constituencies are incentivized to cooperate and can sustain effective partnerships thanks to their ability to form a collective identity and credibly commit to the alliance. However, groups that share constituencies start threatening each other's survival and post-war payoffs if they compete over recruits. My theoretical discussion suggests that shared recruitment pools serve as negative incentives for cooperation and positive incentives for infighting. Thus;

> Hypothesis 2: Pairs of groups with a shared constituency that draw on different recruitment pools are likely to cooperate with each other.

[47](Jarstad and Nilsson 2008; Ottmann and Vüllers 2015)
[48](Zartman 1993; Gent 2011)
[49](Ottmann and Vüllers 2015)
[50](Weinstein 2005, 2007)

Hypothesis 3: Pairs of groups with a shared constituency that draw on the same recruitment pool are likely to fight each other.

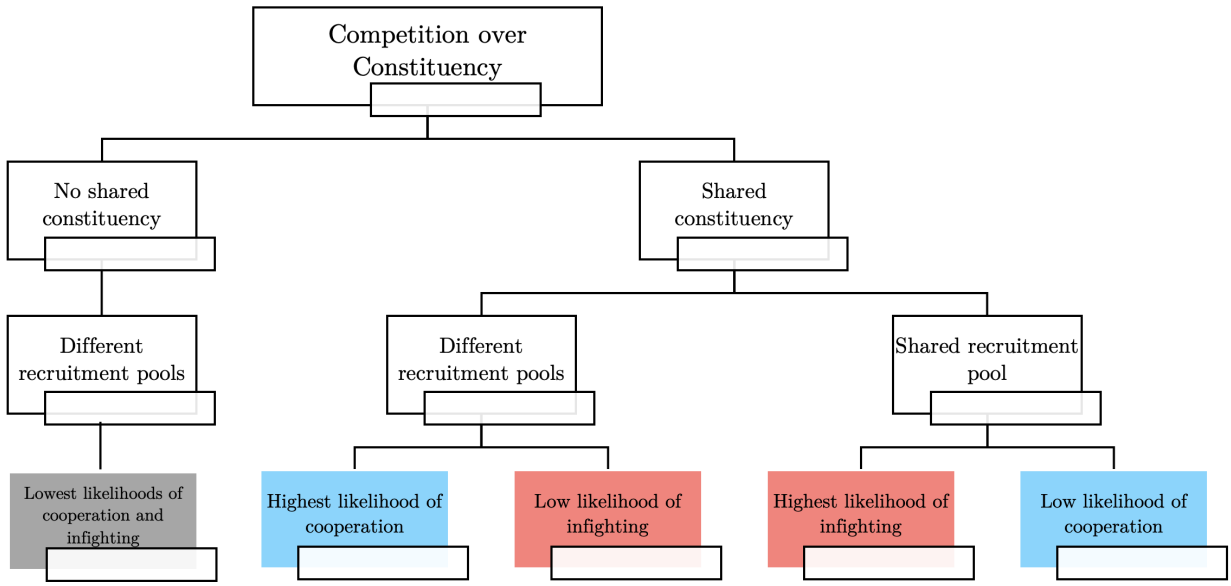


Figure 2. Theoretical Summary Chart

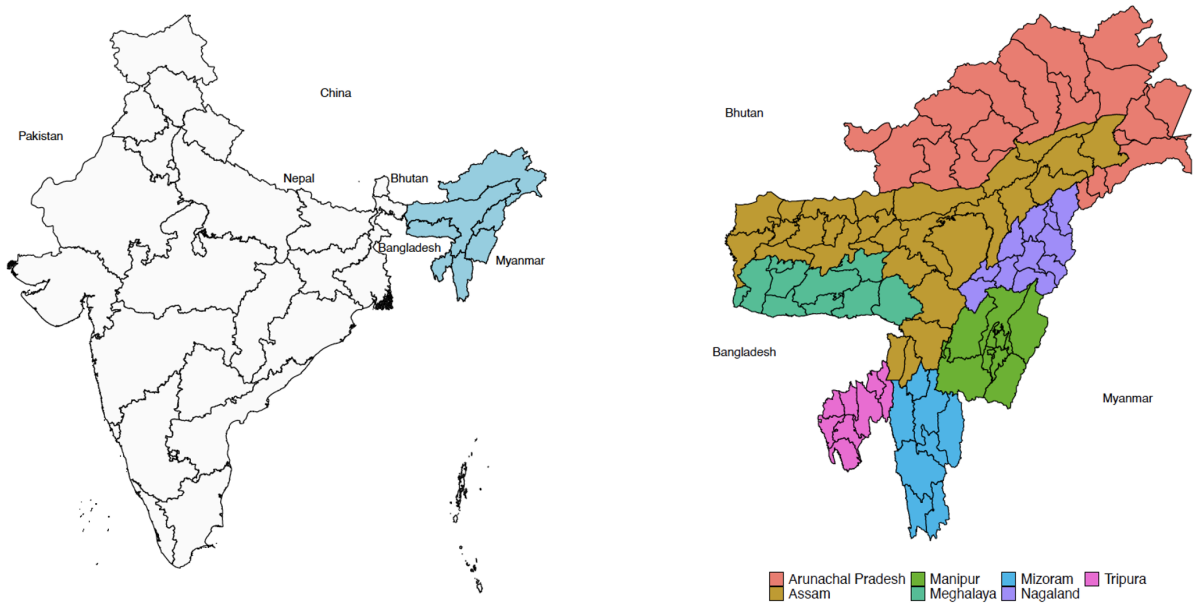
Research Design

To test my hypotheses, I use Temporal Exponential Random Graph Models (TERGMs) on a novel time-series network database of cooperative and adversarial relations between 53 ethnonationalist Northeast Indian militant groups from 1981 through 2021. My focus on Northeast India stems from three interrelated reasons. First, as shown in Figure 3, Northeast India denotes a relatively small, circumscribed operational location. This implies that the lack of inter-group cooperation or infighting is not simply a function of distance.

Secondly, being surrounded by neighboring states such as Bhutan, Bangladesh, and Myanmar, the Northeast Indian conflict environment has kinship ties to neighboring states[51], which makes my case selection an ideal one to test expectations regarding constituency-related arguments. Finally, my data collection relying on third-party reporting and secondary domestic sources is presumably much less biased than many publicly available datasets because even local newspapers in Northeast India have English-language editions[52]. Despite the limited scope, my analysis dataset is suitable

[51](Maaker and Joshi 2007)

[52]The local newspapers consulted are the Times of India, the Telegraph (India), Hindustan Times, Indian Express, India Today, the North East Times, the Northeast Today, Meghalaya Times, and Assam Tribune.



(a) Map of India (b) Map of Northeast India

Figure 3. Mapping Northeast India

for investigating the relationship between inter-group relations and constituencies and recruitment pools.

Data Collection

The time-series network data is collected by the authors as a part of a broader data-collection effort. The data collection includes all armed non-state organizations, including groups described as rebels, insurgents, and terrorists. As a result, the data provide broader insights into armed non-state inter-group relations than those focusing solely on rebel[53] or terrorist[54] groups.

Identifying a complete list of actors in a network is crucial from a theoretical and methodological perspective. Extant data collection efforts on inter-group militant networks have focused almost exclusively on lethal militant groups. For example,[55] and[56] use data from the Terrorism Knowledge Base (TKB), wherein 72.1 percent of the incidents of terrorism are perpetrated by unidentified groups. Given that an enormous portion of violent incidents goes unclaimed, it may be the case that a significant number of active, operational militant groups is not included in currently available datasets of militant networks. This is problematic from a theoretical perspective because smaller groups may attempt to prey on the same recruitment pool as larger groups, thereby influencing the

[53](Bapat and Bond 2012; Christia 2012)
[54](Asal and Rethemeyer 2008)
[55]Asal and Rethemeyer (2008)
[56]Asal, Ackerman and Rethemeyer (2012)

behavior of larger groups without claiming many lives. The overreliance on large, lethal groups also poses serious methodological problems because incomplete networks with missing nodes may cause researchers to over-or under-estimate the prevalence of ties and confound measures of centrality[57].

To minimize the bias resulting from incomplete actor lists, my data compiles information on 53 groups -at least half of which have not been included in previous network data collection efforts- that fought over independence, autonomy, or greater self-determination rights in the 7 Northeastern states of India. To identify a list of actors, I started my data collection process with a list of 26 Northeast Indian groups identified in the UCDP/PRIO Armed Conflict Dataset (ACD) version 21.1. As my coders collected information on basic characteristics of the UCDP/PRIO groups using secondary sources[58], they made lists of other groups mentioned in sources. Then, I corroborated these lists against each other and identified the non-UCDP/PRIO groups that (a) operated in Northeast India between 1981 and 2021, (b) announced a name for their group, and (c) used armed force in a political incompatibility[59]. A complete list of groups included is presented in Appendix 2.

Figure 4 illustrates the break-up of groups included in my data. As shown in Panel A of Figure 4, notable differences exist between UCDP/PRIO and non-UCDP/PRIO groups. For example, most non-UCDP/PRIO groups adhere to a purely ethno-nationalist ideology (Panel C). In contrast, religious-oriented ideology is very common among UCDP/PRIO groups. Similarly, most non-UCDP/PRIO groups appeal to Garo, Karbi, Khamti, and Khasi-Jaintia constituencies, whereas the UCDP/PRIO groups are dominated by Bodo, Dimasa, Tripuri, and Naga groups.

These descriptive statistics suggest that smaller, non-lethal militant groups might have systematically different social origins. Excluding them from analyses of the relationship between competition over the constituency and inter-group relations might substantially bias estimations and inferences. The prevalence of splinter factions within non-UCDP/PRIO groups (Panel B) raises further concerns regarding publicly available datasets. Splintering is one of the most common ways militant groups emerge[61] and signals an innate competition between splinter and parent organizations. Yet, based on the comparison of my novel data with the UCDP/PRIO dataset, the existing databases seem to be lacking information on a great deal of splinter factions.

A second goal of my data collection was to document the temporal variation in militant group

[57](Krebs 2002; Gill and Freeman 2013)

[58]The secondary sources consulted to identify groups not included in the UCDP/PRIO ACD are not necessarily about inter-group relations. They range from news about terrorist attacks, to opinion pieces on groups' talks with the Indian government, to security firms' assessments of the conflict situation in India.

[59]I follow the UCDP/PRIO Armed Conflict Dataset's (ACD) of groups: "any non-governmental group of people having announced a name for their group and using armed force to influence the outcome of the stated incompatibility"[60] but also include in my data groups that meet the above definition that did not cause 25 battle-related deaths.

[61](Braithwaite and Cunningham 2020)

(a) Status as of 2022

(b) Origins

(c) Group ideology

(d) Religion of the constituency

(e) Ethnicity of the constituency

(f) Area (e.g., state) of operation

Figure 4. Distribution of Groups

networks. The number of actors and ties between actors may change over the years[62]. Many extant data collection efforts temporally aggregate inter-group ties to construct a single network[63]. Temporal aggregation hinders researchers' ability to account for actor entry or exit and limits statistical inference regarding the impact of predictors such as competition over recruitment pool which can temporally vary. To account for actor entry and exit and to estimate the impact of time-variant predictors of inter-group relations, my network data spawn from 1981 to 2021. The dataset lists each militant group in all years, from the group's year of foundation until the group's year of termination, regardless of whether 25 battle-related deaths were observed. Many militant groups were founded and started arms training years before they caused the first battle-related death. Similarly, many groups survived and kept their arms years after they caused the last battle-related

[62](Wood and Kathman 2015; Dorff, Gallop and Minhas 2020)
[63](Gade et al. 2019; Gade, Hafez and Gabbay 2019)

death. Regardless they caused deaths or not in a given year, groups have opportunities to establish cooperation with other groups. Information on how foundation and termination years were coded is in Appendix 1.

Given that my data includes 53 groups over 40 years, the dyadic version of my dataset has 12472 group-group dyad-years. I coded extensive information on cooperation and infighting, shared constituencies and recruitment pools between groups, and several other relevant group- and dyad-level factors. To code the inter-group relationships, I prepared an extensive codebook documenting the potential types of cooperative and adversarial ties, providing their definitions, anecdotes of how a given relationship manifests itself, and a list of keywords that secondary sources frequently use when describing them. The codebook is presented in Appendix 1. Next, undergraduate coders trained in Boolean search techniques used online databases (e.g., Lexis-Nexis, Ebsco, Times of India Historical, the South Asia Terrorism Portal) to identify the existence and nature of all cooperative and adversarial relations in each of my 12472 group-group dyad-years.

Empirical Strategy

I use the above-mentioned novel database to employ social network analyses. In doing so, I first create two different temporal networks: networks of cooperation and infighting. In cooperation networks, following extant works[64], I focus on material cooperation rather than rhetorical cooperation. A tie between two groups indicates material cooperation involving the exchange of resources such as arms, funds, intelligence, and expertise. Pairs of groups are assigned a tie at any given year if they conducted one of the following: joint operations, joint training, exchange of arms or funds, sharing intelligence, and providing logistical support to each other. This measure is particularly useful for testing my hypotheses. Material cooperation is costlier to establish and has a higher chance of increasing groups' capacity[65] and, consequently, is likely more prone to competition between groups. In the infighting networks, a tie indicates violent infighting. Following existing studies of infighting[66], I focus on violent infighting and leave out cases of rhetorical or ideological rivalry. Pairs of groups are assigned a tie at any given year if they engage in armed clashes with each other or conduct assassinations or abductions of each other's members or leaders.

The cooperation and infighting networks are constructed for every year between 1981 and 2021. Figure 5 illustrates the inter-group relations at three different time points. Blue and red lines represent cooperative and infighting ties, respectively. Thick black lines represent edges between groups that both cooperated and fought. The network of militant groups enlarges over the years with the entry of new actors and gets denser as more and more groups start engaging in cooperation

[64](Bapat and Bond 2012; Phillips 2014; Popovic 2018; Gade et al. 2019; Steinwand and Metternich 2022)
[65](Phillips 2014; Blair et al. 2022)
[66](Phillips 2015; Dorff, Gallop and Minhas 2020)

and infighting. The sheer number of actors entering the dataset between 2003 and 2013 is primarily due to the splintering of Naga, Bodo, and Garo militant organizations.

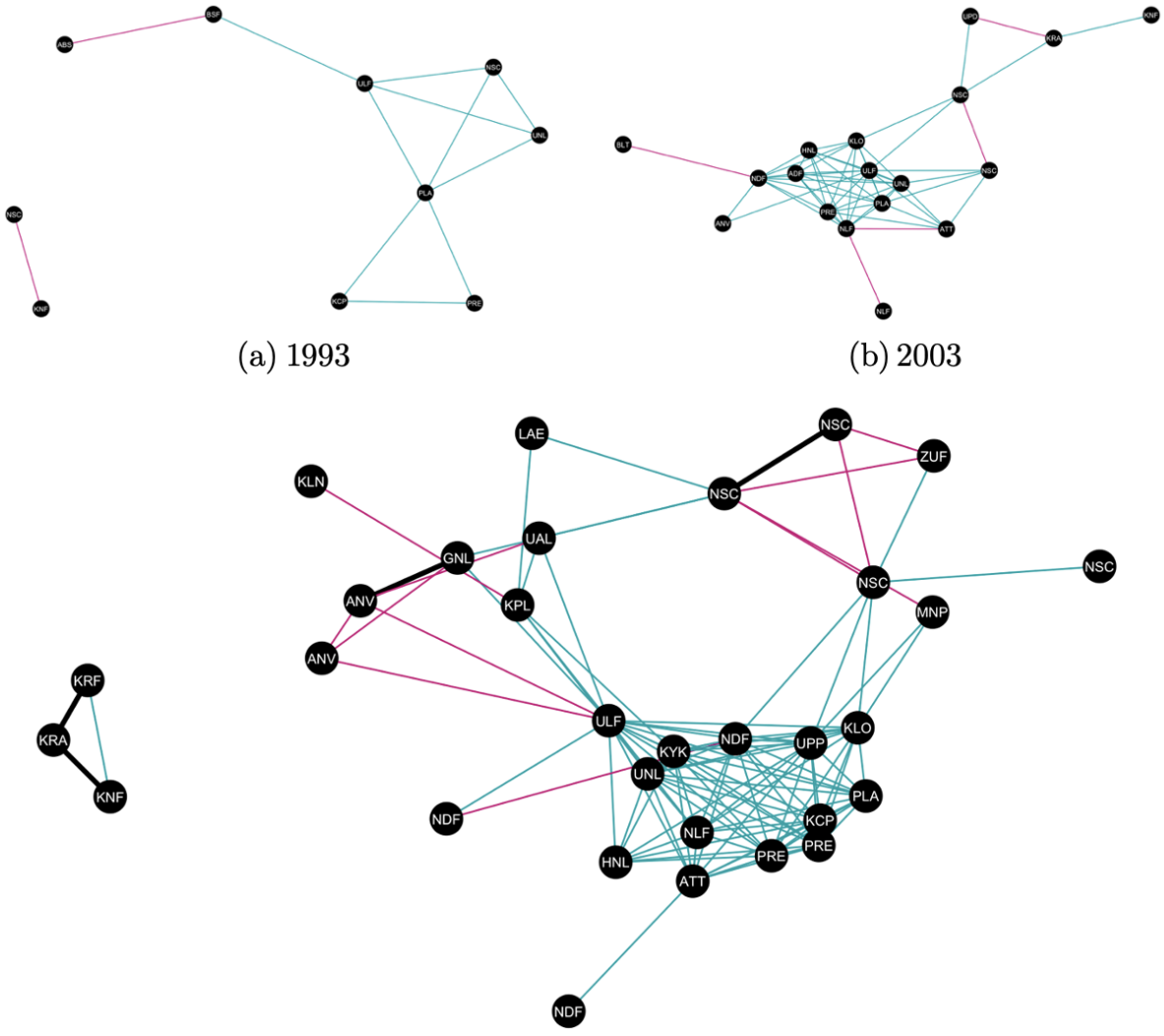
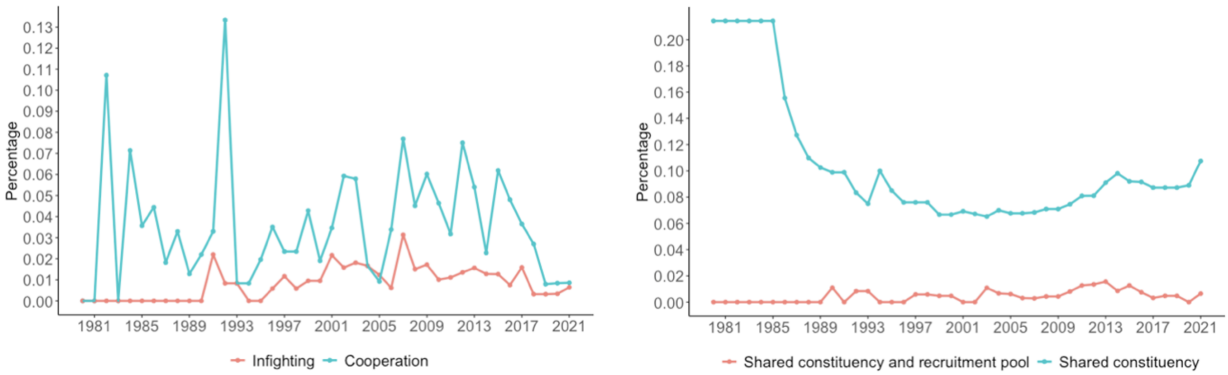


Figure 5. Evolution of the Networks

44 out of 53 groups (83 percent) in my sample cooperated with at least one group, whereas 36 (68 percent) engaged in infighting with at least one group. Yet, many instances of cooperation and infighting were short-lived. Panel A of Figure 6 shows the prevalence of dyad-years that involved cooperation (or infighting) as a percentage of total dyad-years at a given year across time. Both cooperation and infighting have become notably more common over the years. Yet, the vast majority of dyad-years involve no instance of cooperation or infighting. These broad patterns also demonstrate the merits of documenting the temporal variation in militant group networks.

Conventional statistical analysis methods assume independent dyad-year observations where



(a) Cooperation and Infighting

(b) Constituency and recruitment pool

Figure 6. Cooperation, Infighting, and Constituency and Recruitment Pool in Dyad-Years

Group A's decision to cooperate with Group B is independent of the two groups' respective cooperative relations with Group C. However, this assumption is problematic in the study of alliances and rivalries[67]. Militant groups' decision to cooperate or fight with one another partially depends on their relations with other groups: the probability of a tie forming between two actors depends upon the structure of the rest of the network.

I use Temporal Exponential Random Graph Models (TERGMs) to analyze my cooperation and infighting networks. TERGMs accommodate inter-temporal dependence in longitudinally observed networks[68] by extending ERGMs, flexible tools that can simultaneously incorporate interdependence and covariate effects. One advantage of ERGMs and their extensions over other network modeling approaches, such as the Stochastic Actor-Oriented Models, is that network statistics in the ERGMs are defined globally[69], making it possible to model network dependencies instead of just controlling for them.

Key Independent Variables

I have two key independent variables: SHARED CONSTITUENCY and SHARED RECRUITMENT POOL. Both are exogenous dyadic covariates coded using the information compiled during my broader data collection effort on Northeast India. I define constituency as "the broad social group on whose behalf [militants] claim to fight, with the objective of addressing the predicament it faces"[70]. Using secondary sources, I identified the ethnic and/or tribal group on whose behalf the

[67](Maoz et al. 2005; Cranmer, Desmarais and Menninga 2012)
[68](Leifeld, Cranmer and Desmarais 2018)
[69](Block, Stadtfeld and Snijders 2019)
[70](Balcells, Chen and Pischedda 2022)

groups in my data fight.

SHARED CONSTITUENCY is a binary indicator coded 1 if pairs of groups claimed to fight on behalf of the same ethnic/tribal group, and 0 otherwise. For example, both BLTF and the NDFB claim to fight on behalf of the Bodo ethnic group, implying that they share a constituency. Although I have considered the possibility that groups may alter their ethnic identity over time, I have not identified any such case. Thus, my SHARED CONSTITUENCY measure is time-invariant. In my sample, 47 out of 53 groups (89 percent) shared a constituency with at least one other group. Pairs of groups are coded to share a constituency in 1059 dyad-years (8.5 percent). In Appendix 4, I also estimate a series of models with an alternative proxy of shared constituency: appealing to the same ethnoreligious groups. My main findings are comparable across different measures of shared constituency.

My second key independent variable -SHARED RECRUITMENT POOL- measures the extent to which pairs of groups recruit fighters among the same social networks. Given the clandestine nature of militant group activities and the recruitment processes, pinpointing the social networks within which groups are embedded is often impossible. Yet, when groups share a recruitment pool, they likely have access to the same potential recruits through quotidian relationships[71]. Therefore, I proxy shared recruitment pools with the data I collected on militant defections between pairs of groups. For example, in 2010, a regional commander of NSCN-IM in the Dimapur of Nagaland defected to NSCN-K. In 2013, the NSCN-IM announced that six militants from NSCN-K and NSCN-KK left their groups and joined the NSCN-IM. In 2019, the Zeliangrong United Front (ZUF) chairman Raitu Chawang published a statement welcoming the former executive member of NSCM-IM, Z.D Bonn Gangemi, who recently defected to ZUF. There are inherent concerns over relying on militant groups' own reporting of defections. However, one could argue that if groups were to lie about side-switching, they would be motivated to conceal that they lost militants to other groups. Yet, my data collection effort identified several instances in which groups acknowledged that some of their members defected to other groups and other instances where captured militants revealed that they switched between groups during interrogation. For example, in 2006, NSCN-IM issued a briefing admitting that 'Major' Lokishe had defected to NSCN-K.

SHARED RECRUITMENT POOL is a time-variant binary indicator coded 1 for dyad-years if there is evidence that across-group militant defections occurred, and 0 otherwise. When the dyad consists of a splinter group and its parent organization, the year of splintering is considered to have involved militant defections across groups—notably, only 33 percent of dyads consisting of groups with shared recruitment pools involved splinter-parent dyads. Hence, my measure of shared recruitment pool is not simply a proxy for competition between splinter factions and parent organizations. I also considered the possibility that militants might defect between groups that do

[71](Parkinson 2013)

not share a constituency as a result of material incentives being offered[72]. However, I have not identified militant defections between groups without shared constituencies. As a result, dyads in my sample fall into one of the three categories: pairs of groups without a shared constituency, those with a shared constituency that draw on different recruitment pools, and those with shared constituencies and recruitment pools. 30 out of 53 groups (57 percent) are coded to have a shared recruitment pool with at least one other group for at least a year. In Appendix 5, I also estimate a series of models with an alternative measure: non-militarized territorial disputes between groups. My main findings are comparable across different measures of shared recruitment pool.

Table 1 shows the conditional distribution of inter-group relations on my key independent variables. Of the 976 dyad-years involving a pair of groups that share constituencies but recruit from different pools, 99 dyad-years (10 percent) experienced cooperation, and 51 dyad-years (5 percent) experienced infighting. In comparison, of the 80 dyad-years involving a pair of groups that recruit from the same pool of fighters, 4 dyad-years (5 percent) experienced cooperation, and 45 dyad-years (56 percent) experienced infighting. This suggests that shared constituencies facilitate cooperation in the absence of competition over the recruitment pool, whereas competition over the recruitment pools facilitates infighting, as expected.

Table 1. Conditional Distribution of Inter-Group Relations on Key Independent Variables

	No shared constituency	Shared constituency and different recruitment pools	Shared constituency and shared recruitment pool	Total
No engagement	11011 (96.5 %)	826 (84.6 %)	31 (38.8 %)	11868 (95.2 %)
Cooperation	365 (3.2 %)	99 (10.1 %)	4 (5 %)	468 (3.7 %)
Infighting	36 (0.3 %)	51 (5.2 %)	45 (56.2 %)	132 (1 %)
Total	11412 (91.5 %)	976 (7.8 %)	80 (0.6 %)	12472 (100 %)

Control Variables

I control for several group, dyad, and network-level covariates in my models. Unless otherwise stated, all control variables are collected by the authors. Beginning at the group level, I control for foreign state support, military capacity, and group ideology. First, groups with foreign state support can be sought out as allies by those without foreign support Siqueira and Sandler (2006). On the other hand, groups with state supporters may be prone to infighting because foreign supporters may use groups to outmaneuver rival groups that threaten the foreign government's agenda[73].

[72](Weinstein 2005)
[73](Fjelde and Nilsson 2012)

FOREIGN STATE SUPPORT is a binary indicator coded 1 if the group received support from a foreign government in the form of arms, funds, training, or logistical assistance in a given year, and 0 otherwise.

Second, weaker groups may not be credible alliance partners because they may be tempted to exploit their allies[74]. They may, however, be more likely to engage in infighting because they make easier targets[75]. I proxy military capacity with the logistical complexity of groups' attacks as more capable groups can carry out logistically more complex attacks. Following[76], I hold that assassinations, bombings, hijackings, and hostage-takings are logistically complex attacks. I rely on the Global Terrorism Database (GTD)'s *attacktype* variables to compute the weighted percentage of logistically complex attacks committed by a given group in a given year. MILITARY CAPACITY is a continuous measure ranging from 0 to 1.

I control for group ideology (e.g., Marxist/revolutionary ideology, religious-oriented ideology). Groups motivated by the same ideology tend to form cooperative ties that cluster around a powerful and ideologically influential group[77]. MARXIST/REVOLUTIONARY ideology is a binary indicator coded 1 if the group's ethnonationalism embraced a socialist, Marxist, Maoist, or otherwise revolutionary ideology, and 0 otherwise. RELIGIOUS-ORIENTED ideology is coded 1 if the group's political goals included advocating for a Christian, Hindu, or Muslim homeland, and 0 otherwise.

At the dyad-level level, I control for shared territorial presence, joint foreign state supporter, the dyadic difference in military capacity, rhetorical affinity, and joint Marxist/revolutionary or religious-oriented ideology. First, shared territorial presence can facilitate cooperation by easing communication and transaction[78]. Yet, competition over a critical piece of territory may threaten groups' resource mobilization capacity, leading to infighting[79]. SHARED TERRITORIAL PRESENCE is a binary indicator coded 1 if pairs of groups operated in the same district(s), and 0 otherwise[80].

Joint foreign state supporters can facilitate cooperation and prevent infighting by acting as institutionalized guarantees to inter-group alliances[81]. JOINT FOREIGN STATE SUPPORTER is a binary indicator coded 1 if both groups in the dyad derived support from the same foreign government, and 0 otherwise. In addition, the rhetorical affinity between groups is likely to facilitate cooper-

[74](Olson 1965)
[75](Fjelde and Nilsson 2012)
[76]George (2018)
[77](Bacon 2017; Balcells, Chen and Pischedda 2022)
[78](Steinwand and Metternich 2022; Blair et al. 2022)
[79](Soule and King 2008)
[80]My data collection identified the districts of Northeast India where the groups in my data operate. Several groups, such as ULFA and NSCN-IM, retained a territorial presence in as many districts as twenty, whereas others, such as Manipur Naga People's Front (MNPF) and Tripura National Volunteers (TNV), were confined in a single district.
[81](Popovic 2018; Bapat and Bond 2012)

ation and decrease the risk of infighting[82]. RHETORICAL AFFINITY is coded 1 if pairs of groups jointly published at least one public statement or a statement containing verbal support for each other in a given year.

Military power asymmetry can facilitate both cooperation and infighting. Weaker groups may seek stronger groups as allies. Stronger groups may seek weaker groups as partners due to their desire to maximize decision-making autonomy in the alliance[83]. Yet, stronger groups may preventively attack smaller actors to maintain the status quo[84], or weaker groups can challenge the strongest actor to acquire greater representation[85]. DYADIC DIFFERENCE IN CAPACITY is a continuous variable denoting the absolute dyadic difference between groups' military capacity.

Finally, at the dyad-level, I control for joint ideology. Groups with a shared ideology may realize the benefits of resource aggregation via cooperation while minimizing the costs of sustaining cooperation[86]. HOMOPHILY: MARXIST/REVOLUTIONARY ideology denotes whether a given pair is jointly Marxist/revolutionary or jointly non-Marxist. HOMOPHILY: RELIGIOUS-ORIENTED ideology denotes whether a given pair is joint religious-oriented or jointly non-religious[87].

At the network-level, I control for NODE POPULARITY and TRANSITIVITY. Popularity effects, sometimes referred to as preferential attachment, refer to network actors' tendency to form ties with actors that have ties to many actors[88]. Militant group cooperation exhibits core-periphery patterns in which alliances cluster around a few core groups[89]. This may be the case because a group's reputation for being a committed alliance partner increases the appeal of allying with that group. Militant infighting networks are also documented to exhibit popularity effects[90]. To account for the popularity effects, I include 2-stars in my models[91].

Transitivity reflects the actors' tendency to cluster together. In an alliance network, the transitivity effect captures the idea that the friend of my friend is my friend. In a conflict network, transitivity refers to the idea that the enemy of my enemy is my enemy. I expect the militant cooperation network to exhibit transitivity because alliances tend to form between groups with common enemies[92]. However, an infighting network is unlikely to exhibit such transitivity[93]. To capture the transitivity effect, I use the gwesp term in TERGMs[94]. Table 2 summarizes my covariates and their

[82](Blair et al. 2022)
[83](Gade et al. 2019)
[84](Pischedda 2018)
[85](Krause 2017; McLauchlin and Pearlman 2012)
[86](Bacon 2017; Gade et al. 2019)
[87]The ideological homophily effects are captured by the nodematch term in ERGMs.
[88](Cranmer, Desmarais and Menninga 2012)
[89](Asal et al. 2016; Bacon 2017, 2018)
[90](Gade, Hafez and Gabbay 2019)
[91](Cranmer, Desmarais and Menninga 2012)
[92](Asal et al. 2016; Bacon 2017)
[93](Cranmer and Desmarais 2011)
[94]Gwesp models the propensity for two actors to form a tie for each partner they have in common. This triad effect is

expected effects on cooperation and infighting, and shows the descriptive statistics. My measures do not suffer from missingness, which is important to note since structural network models, such as TERGMs, are sensitive to missing data.

Table 2. Covariates and Expected Effects on Cooperation and Infighting

Variable	Cooperation	Infighting	Obs.	Mean	Std. Dev.	Min.	Max.
Shared constituency	+	+	12472	0.08	0.28	0	1
Shared constituency and recruitment pool	-	+	12472	0.01	0.08	0	1
Shared territorial presence	+	+	12472	0.34	0.47	0	1
Foreign state support (Group A)	+	+	12472	0.05	0.21	0	1
Foreign state support (Group B)	+	+	12472	0.1	0.31	0	1
Joint foreign state supporter	+	-	12472	0	0.06	0	1
Military capacity (Group A)	-	+	12472	1.76	4.95	0	49
Military capacity (Group B)	-	+	12472	2.58	6.53	0	49
Dyadic difference in capacity	+	-	12472	3.54	7.2	0	49
Rhetorical affinity	+	-	12472	0.05	0.22	0	1
Marxist/revolutionary ideology (Group A)	-	+	12472	0.17	0.37	0	1
Marxist/revolutionary ideology (Group B)	-	+	12472	0.38	0.49	0	1
Homophily: Marxist/revolutionary ideology	-	+	12472	0.6	0.49	0	1
Religious-oriented ideology (Group A)	+	-	12472	0.31	0.46	0	1
Religious-oriented ideology (Group B)	+	-	12472	0.33	0.47	0	1
Homophily: religious-oriented ideology	+	-	12472	0.56	0.5	0	1
Node popularity	+	+					
Transitivity	+	-					

Results

To test my hypotheses, I run a series of Temporal Exponential Random Graph Models (TERGMs) on my cooperation and infighting networks. I anticipate that group-dyads without shared constituencies will be unlikely to engage with each other. Furthermore, I expect to see variation within pairs of groups that share a constituency: dyads with shared constituencies that draw on different recruitment pools should be likely to cooperate, whereas dyads with shared constituencies that draw on the same recruitment pool should be likely to fight. Table 3 presents my main TERGMs. Models 1 and 5 are simple models without network dependency terms. When TERGMs are estimated without network effects, they are structurally equal to dyadic logistic models[95]. Models 2

unlikely to be linear, which means that each additional shared partner should add a smaller amount to the log odds of forming a tie. The decay parameter specified for the gwesp term controls the rate at which the propensity to form a tie diminishes with each shared partner. I specify the decay parameter as 1.

[95](Cranmer, Desmarais and Menninga 2012)

and 6 introduce network dependency terms (e.g., node popularity and transitivity). Models 3 and 7 introduce control variables. Finally, Models 4 and 8 are fully extended models with time trends.

Table 3. TERGMs of Militant Cooperation and Infighting, 1981-2021

	Cooperation			
	Model 1	Model 2	Model 3	Model 4
Edges	-3.89 [-4.21; -3.65]*	-4.77 [-5.01; -4.58]*	-5.11 [-5.64; -4.67]*	-4.01 [-4.68; -3.42]*
Shared constituency	2.04 [1.76; 2.30]*	1.42 [1.19; 1.60]*	1.31 [1.09; 1.53]*	1.24 [1.01; 1.46]*
Shared constituency and recruitment pool	-0.89 [-2.05; -0.37]*	-1.08 [-2.19; -0.35]*	-1.23 [-2.38; -0.44]*	-1.10 [-2.26; -0.26]*
Node popularity		0.19 [0.15; 0.27]*	0.18 [0.14; 0.25]*	0.20 [0.16; 0.29]*
Transitivity		0.50 [0.32; 0.64]*	0.46 [0.30; 0.57]*	0.44 [0.27; 0.56]*
Shared territorial presence			0.41 [0.26; 0.58]*	0.44 [0.28; 0.60]*
Foreign state support			0.30 [0.10; 0.45]*	0.15 [-0.05; 0.32]
Joint foreign state supporter			0.67 [-1.23; 1.75]	0.55 [-1.34; 1.62]
Military capacity			-0.01 [-0.06; 0.02]	-0.01 [-0.05; 0.02]
Dyadic difference in capacity			0.04 [0.01; 0.08]*	0.03 [-0.00; 0.07]
Rhetorical affinity			0.83 [0.51; 1.21]*	0.90 [0.57; 1.27]*
Left-wing ideology			0.20 [-0.09; 0.47]	0.07 [-0.21; 0.31]
Homophily regarding left-wing ideology			-0.26 [-0.65; 0.12]	-0.28 [-0.68; 0.10]
Religious ideology			0.04 [-0.13; 0.24]	0.01 [-0.18; 0.20]
Homophily regarding religious ideology			-0.00 [-0.30; 0.26]	0.03 [-0.27; 0.29]
Time				-0.04 [-0.05; -0.02]*
	Infighting			
	Model 5	Model 6	Model 7	Model 8
Edges	-5.76 [-6.49; -5.26]*	-6.53 [-7.03; -6.15]*	-6.62 [-7.87; 1.06]	-5.77 [-7.36; 1.89]
Shared constituency	2.30 [1.72; 3.01]*	2.59 [2.06; 3.18]*	2.25 [1.69; 2.92]*	2.25 [1.69; 2.92]*
Shared constituency and recruitment pool	3.71 [3.33; 4.25]*	3.29 [2.79; 3.99]*	3.01 [2.46; 3.90]*	3.06 [2.50; 3.96]*
Node popularity		0.56 [0.41; 0.71]*	0.50 [0.30; 0.62]*	0.53 [0.34; 0.64]*
Transitivity		0.04 [-0.36; 0.40]	0.03 [-0.37; 0.38]	0.03 [-0.36; 0.39]
Shared territorial presence			1.57 [1.12; 2.11]*	1.58 [1.16; 2.11]*
Foreign state support			0.28 [-0.14; 0.69]	0.13 [-0.26; 0.55]
Joint foreign state supporter			-0.21 [-14.34; 1.12]	-0.30 [-14.39; 1.07]
Military capacity			0.05 [0.03; 0.11]*	0.06 [0.03; 0.11]*
Dyadic difference in capacity			-0.11 [-0.27; -0.04]*	-0.11 [-0.28; -0.04]*
Rhetorical affinity			-0.30 [-1.17; 0.39]	-0.24 [-1.10; 0.42]
Left-wing ideology			0.12 [-0.36; 0.52]	0.05 [-0.48; 0.45]
Homophily regarding left-wing ideology			0.13 [-0.50; 0.71]	0.14 [-0.48; 0.71]
Religious ideology			-0.81 [-8.22; -0.24]*	-0.84 [-8.26; -0.25]*
Homophily regarding religious ideology			-0.68 [-8.10; -0.04]*	-0.66 [-8.08; -0.03]*
Time				-0.03 [-0.05; -0.01]*
Network-years	1981-2021	1981-2021	1981-2021	1981-2021
Number of dyad-years	12472	12472	12472	12472

Note: Bootstrapped pseudolikelihood estimates, as described in[96], reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. Asterisks indicate that the coefficient is statistically significant at or beyond the traditional 0.05 level.

In all 8 models, the coefficients on my key independent variables are signed in the expected direction and significant, yielding support for my hypotheses. To begin with, shared constituency is associated with an increase in the likelihood of inter-group cooperation. Yet, it is also associated with an increase in the likelihood of infighting. These findings parallel my expectation that pairs of groups with shared constituencies are more likely than those without shared constituencies to engage with each other (Hypothesis 1). In addition, the fact that shared constituencies are found to be associated with both cooperation and infighting illustrates the merit of my theoretical framework, which conceptually redefines competition over constituency to distinguish between shared

constituencies and shared recruitment pools.

In Models 1 through 4, shared recruitment pool is found to be associated with a decrease in the likelihood of cooperation, as expected. While shared constituencies facilitate cooperation, shared recruitment hinders cooperation. In contrast, in Models 5 through 8, shared recruitment pool is found to be associated with an increase in the likelihood of infighting. The coefficient on shared recruitment pool is larger than the coefficient on shared constituency in infighting models, suggesting that shared recruitment pool has a larger effect on the likelihood of infighting. To explain my findings more intuitively, Figure 7 graphs the relationship between shared constituencies and inter-group relations, conditional on whether pairs of groups with shared constituencies compete over recruits or not. The predictions are generated on the extended models -Models 3 and 7- using the techniques suggested by[97] for micro-level interpretation of TERGMs. The figure illustrates a conditional relationship consistent with my Hypotheses 2 and 3.

As shown in Figure 7, the predicted probabilities that groups without shared constituencies will cooperate or fight are drastically low (Hypothesis 1). Hypothesis 2 predicts that pairs of groups with a shared constituency that draw on different recruitment pools are likely to cooperate rather than fight. As expected, Figure 7 shows that the highest predicted probability of cooperation (14 percent) is realized when groups have a shared constituency and different recruitment pools. The same probability is only 6 percent for groups with a shared recruitment pool. Finally, Hypothesis 3 suggests that pairs of groups with a shared constituency that draw on the same recruitment pool are most likely to fight each other. As expected, Figure 7 illustrates that shared recruitment pool acutely increases the risk of infighting. While groups with a shared constituency and different recruitment pools only have a 3 percent chance of fighting, groups with a shared recruitment pool have a 56 percent chance of fighting.

The results of TERGMs yield support for my hypotheses. The findings suggest that the conditions under which militant groups are most likely to cooperate are when groups share a constituency but recruit from different pools of potential militants. These findings are robust to controlling for several other group- and dyad-level covariates as well as the network structure. The results also support the premise that the network structure influences the cooperation and infighting-generating processes. As expected, the 2-star network parameter that assesses the effect of node popularity has a significant positive effect on cooperation and infighting in all specifications, suggesting that new groups entering the network are more likely to cooperate with and fight the more popular groups. In addition, the Gwesp statistic that assesses the transitivity in the network produces a positive, significant effect in all cooperation models, as expected, suggesting groups tend to create alliance clusters.

Regarding my control variables, most group- and dyad-level controls return expected results,

[97] Leifeld, Cranmer and Desmarais (2018)

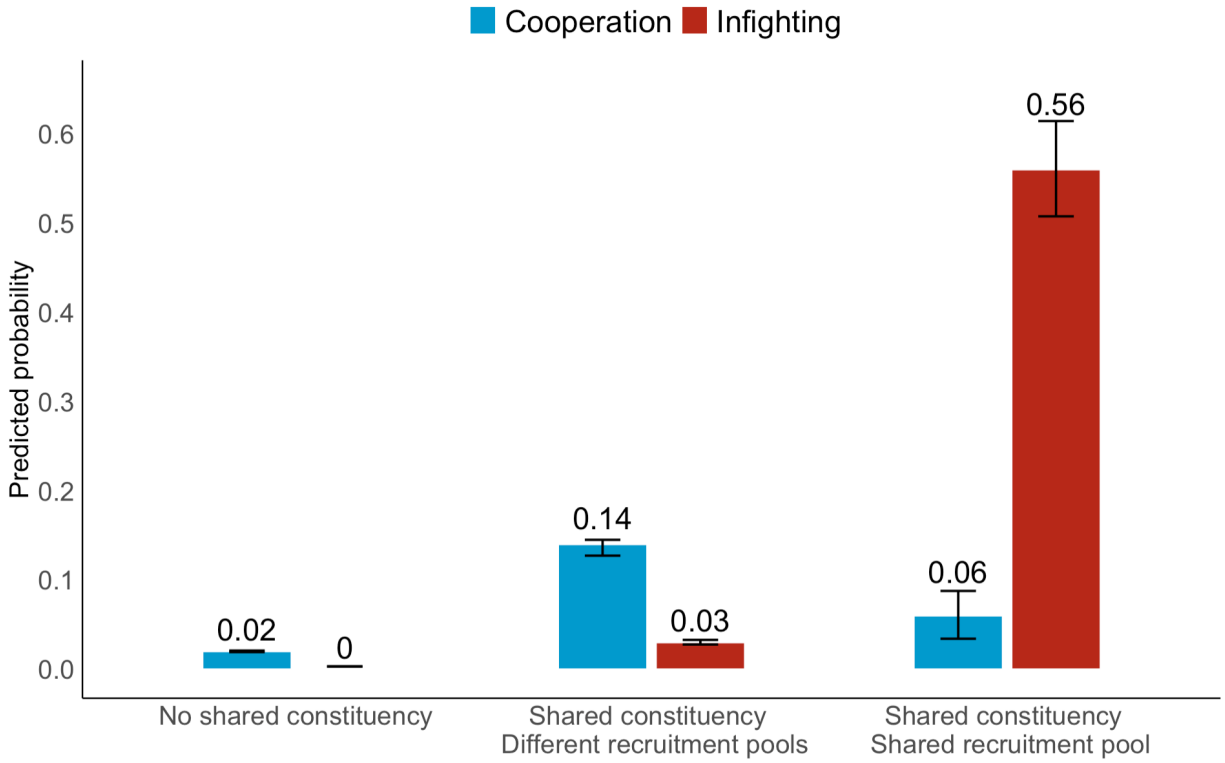


Figure 7. Predicted Probabilities of Cooperation and Infighting in Militant Networks

but many are insignificant, especially when time-trends are accounted for in Models 4 and 8. Foreign state support is found to have a significant positive effect on cooperation. This may be because state supporters can mitigate credible commitment problems between groups[98]. Neither state support variables are found to be significant predictors of militant infighting.

Military capacity has a negative but insignificant effect on cooperation, whereas it has a strong, positive, and significant impact on infighting. More capable groups are found to be more likely to fight other groups. This may be because only competent groups can afford to dedicate resources to infighting[99]. The absolute difference between groups' capacity is also found to be a significant predictor of inter-group relations. Cooperation is more likely between unequal partners[100], whereas infighting is more likely between groups with comparable capabilities.

It is important to note that the finding regarding the relationship between power asymmetry and infighting runs contrary to the earlier research[101]. This may be because previous studies did not account for the impact of endogenous network structure on militant infighting. It is possible

[98](Bapat and Bond 2012; Popovic 2018)
[99](Fjelde and Nilsson 2012)
[100](Gade et al. 2019)
[101](McLauchlin and Pearlman 2012; Krause 2017; Pischedda 2018)

that more popular groups are more militarily capable and that infighting in asymmetric dyads results from popularity effects rather than power asymmetry. As for group ideology, joint religious ideology has a large, negative, significant effect on infighting, suggesting that pairs of religiously-oriented groups are unlikely to fight each other[102].

Goodness-of-Fit

I assess the endogenous goodness-of-fit (GOF) of my TERGM by simulating 100 networks from each time step and computing the statistics for edge-wise shared partners, geodesic distances, and degree. Each function compares simulated networks with the observed ones and compiles the comparison into a single quantity. The graphs illustrating the GOF assessment for my TERGMs are included in Appendix 3. GOF assessment shows that the models fit the observed network well, and the extended models with network dependence terms, controls, and time-trends tend to outperform the simpler models.

Robustness Checks

My robustness checks, reported in my Appendix, include (a) TERGMs with alternative measures of shared constituencies and shared recruitment pools, and additional controls such as groups' foreign bases, group age, and groups' social origins as splinter factions, (b) Multinomial Logit models that treat inter-group relations outcome as a categorical dependent variable, (c) Seemingly Unrelated Regression models that simultaneously estimate the likelihood of cooperation and infighting, and (d) Latent Space Models using a bilinear latent model approach with two dimensions. My findings are robust to these alternative measures, model specifications, and modeling approaches. The coefficients on shared constituency remain positive and significant in all but one of my alternative models. The coefficients on shared recruitment pool remain negative and significant in all but one of my alternative cooperation models and positive and significant in all of my alternative infighting models, as hypothesized.

Conclusion

I have discussed that shared constituencies incentivize cooperation between pairs of groups that try to appeal to the same civilian population because they promote collective identity, lengthen the shadow of the future, and justify the alliance in the eyes of the constituency. Yet, I further argued

[102](Bacon 2017; Gade, Hafez and Gabbay 2019)

that the effects of shared constituencies on inter-group relations are conditioned by factors that disincentivize cooperation by threatening the groups' chances of survival and military/political success, namely shared recruitment pools. More specifically, I hypothesized that shared constituencies would increase the likelihood of cooperation between pairs of groups only if groups could differentiate their recruitment pools from each other's, while shared recruitment pools would deter pairs of groups from cooperation and instead motivate them to fight each other. Using novel network data on inter-group relations in Northeast India coupled with original data on groups' social networks, I find support for my hypotheses. Overall, my study raises questions about the existing constituency-related explanations of inter-group relations. My findings are consistent with my premise that a conceptual distinction exists between shared constituency and competition over recruitment pool, which should be considered when advancing a more fine-tuned theoretical understanding of inter-group cooperation and infighting.

Notably, there are a few caveats worth mentioning. First, my data collection efforts mainly relied on third-party reporting and militant groups' public statements concerning militant defections across groups. Consequently, my measure of shared recruitment pools is mostly limited to the instances where groups preferred to publicly acknowledge or denounce side-switching. I acknowledge that there may be other instances where groups preferred to keep this information private. Yet, in the absence of alternative data sources that researchers can rely on to get insights into which social networks groups heavily recruit from, my measure of shared recruitment pools constitutes a valid proxy of competition over recruits. Future studies of inter-group cooperation and infighting should pay more attention to the conceptualization and operationalization of inter-group competition in a way that accounts for the micro-dynamics of recruitment into militancy. Furthermore, studies and data collection projects on the social origins of armed groups should attempt to disentangle the precise social networks in which groups are embedded from the broader constituencies on whose behalf they claim to fight.

Secondly, due to the anticipated difficulties in collecting cross-national time-series data on militant defections across groups, my study focused on a single geographic location. Although I believe that my theory of competition over recruitment pools should apply to groups elsewhere, I acknowledge that Northeast India represents a circumscribed operational location. The lack of cooperation or infighting between groups in other regions of the world may be a function of distance. Furthermore, I evaluated my hypotheses using data on a population of ethno-nationalist groups. Although some of my groups adhered to Marxist/revolutionary or religious-oriented ideologies, my sample of militant groups excludes certain types of groups, most notably transnational terrorist groups. Since transnational terrorist groups rarely rely on the support of a civilian constituency, their decision to engage in cooperation and infighting might follow different trajectories. Yet, it is also worth mentioning that even transnational terrorist groups compete over recruitment

pools, as exemplified by ISIS' success in recruiting fighters in areas once dominated by Al-Qaeda affiliates[103].

My work suggests other promising trajectories for future research. First, my distinction between broader constituency and recruitment pool has vast implications for how scholars study competitive conflict environments. Future studies on how competition affects militant group behavior should specify the nature of competition that is at play before generating and testing hypotheses regarding competitive environments. Secondly, my findings complement extant works on how groups' social origins influence their future trajectories[104]. Future studies on inter-group relations should account for how recruitment pools are affected by group origins and consider whether hypothesized relationships might be moderated by groups' recruitment pools. Finally, the increasing use of the Internet and social media by armed groups[105] raises questions about whether online propaganda can successfully expand groups' recruitment pools beyond the original social networks upon which groups were founded. Future studies can investigate whether groups that utilize unconventional communication channels to reach out to potential recruits are less prone to infighting, thanks to their ability to expand their recruitment pools beyond niche social circles.

[103](Malik et al. 2015)

[104](Parkinson 2013; Sarbahi 2014; Staniland 2014; Lewis 2017; Larson and Lewis 2018; Braithwaite and Cunningham 2020)

[105](Bestvater and Loyle 2024)

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Appendix

Contents

Codebook

The data collection project intended to realize two objectives with respect to militant group networks. The term militant groups denote a variety of non-state armed groups including rebel groups, insurgents, and terrorist groups. This project holds that terrorism is primarily a tactic whereas rebellion and insurgency refer to sustained guerilla campaigns. Terrorism as a tactic and rebellion/insurgency are not mutually exclusive concepts. Insurgents and rebels may resort to terrorism and groups designated as terrorists by governments may be involved in insurgencies/rebellions.

Building on the premise that the study of militant group networks would benefit from a more disaggregated approach to collecting network data, I, in an effort to map out a complete network, identified a complete list of the actors in an inter-organizational network before mapping out their relational ties among each other, and in an effort to unambiguously conceptualize and operationalize relational ties, disaggregated militant group cooperation and rivalry into specific types based on the nature of such cooperation and rivalry.

The data collection effort includes the compilation of annual network data on 14 different types of cooperative and conflictual relationships between 52 ethnonationalist militant groups that fought over independence in Northeast India between 1980 and 2021. Northeast India is an interesting case as it includes several militant groups that fight over independence for several ethnic groups (i.e., Nagas, Bodos, Adivasis, Bengalis, Garos, Hmars, Kukis, Mizos, Tripuris).

The list variables in the dataset is as follows:

groupA_ID (Group A Identifier) – If group A is included in the UCDP Actor Dataset version 21.1, the variable groupA_ID is identical to the UCDP Actor Dataset ActorID. If not, groupA_ID is generated by the researcher.

groupA (Group A Name) – Full name of group A

abbrevA (Group A Name Abbreviation) – Abbreviated name of group A

stateA (State Name) – Full name of the state or union territory of India where group A is headquartered in

constituencyA (Constituency) – Ethnic group that group A claims to represent

foundedA (Foundation) – Group A's foundation year

ucdp_startA (UCDP Start Year) - If group A is included in the UCDP/PRIO Armed Conflict Dataset version 21.1, ucdp_startA is identical to the year in which at least 25 battle-related deaths are observed in UCDP/PRIO (e.g., start_date2). If not, ucdp_startA is left blank.

splinterA (Splinter Group) – Whether group A splintered from another group (Binary)

split_fromA (Parent Group) – The full name of the group from which group A splintered. If group A did not splinter from another group, split_fromA is left blank.

split_yearA (Date of Splintering) – The year in which group A splintered from another group. If group A did not splinter from another group, split_yearA is left blank.

pol_party_dumA (Political Party Dummy) – Whether group A was affiliated with a political party in the year of observation (Binary). Affiliation with a political party implies that the political party shares similar political goals with the militant group and there is some evidence that the leader of the political party communicated with the leaders of the militant group. This could be a national or regional party. However, it needs to be officially recognized and eligible to run in the national parliamentary or regional or municipal elections.

pol_partyA (Political Party) – The full name of the political party affiliated with group A.

year (Year of observation)

groupB_ID (Group B Identifier) – If group B is included in the UCDP Actor Dataset version 21.1, the variable groupB_ID is identical to the UCDP Actor Dataset ActorID. If not, groupB_ID is generated by the researcher.

groupB (Group B Name) – Full name of group B

abbrevB (Group B Name Abbreviation) – Abbreviated name of group B

stateB (State Name) – Full name of the state or union territory of India where group B is headquartered in

constituencyB (Constituency) – Ethnic group that group B claims to represent

foundedB (Foundation) – Group B's foundation year

ucdp_startB (UCDP Start Year) – If group B is included in the UCDP/PRIO Armed Conflict Dataset version 21.1, ucdp_startB is identical to the year in which at least 25 battle-related deaths are observed in UCDP/PRIO (e.g., start_date2). If not, ucdp_startB is left blank.

splinterB (Splinter Group) – Whether group B splintered from another group (Binary)

split_fromB (Parent Group) – The full name of the group from which group B splintered. If group B did not splinter from another group, split_fromB is left blank.

split_yearB (Date of Splinter) – The year in which group B splintered from another group. If group B did not splinter from another group, split_yearB is left blank.

pol_party_dumA (Political Party Dummy) – Whether group A was affiliated with a political party in the year of observation (Binary). Affiliation with a political party implies that the political party shares similar political goals with the militant group and there is some evidence that the leader of the political party communicated with the leaders of the militant group. This could be a national or regional party. However, it needs to be officially recognized and eligible to run in the national parliamentary or regional or municipal elections.

pol_partyA (Political Party) – The full name of the political party affiliated with group A.

year (Year) of observation

groupB_ID (Group B Identifier) – If group B is included in the UCDP Actor Dataset version 21.1, the variable groupB_ID is identical to the UCDP Actor Dataset ActorID. If not, groupB_ID is generated by the researcher.

groupB (Group B Name) – Full name of group B

abbrevB (Group B Name Abbreviation) – Abbreviated name of group B

stateB (State Name) – Full name of the state or union territory of India where group B is headquartered in

constituencyB (Constituency) – Ethnic group that group B claims to represent

foundedB (Foundation) – Group B's foundation year

ucdp_startB (UCDP Start Year) – If group B is included in the UCDP/PRIO Armed Conflict Dataset version 21.1, ucdp_startB is identical to the year in which at least 25 battle-related deaths are observed in UCDP/PRIO (e.g., start_date2). If not, ucdp_startB is left blank.

splinterB (Splinter Group) – Whether group B splintered from another group (Binary)

split_fromB (Parent Group) – The full name of the group from which group B splintered. If group B did not splinter from another group, split_fromB is left blank.

split_yearB (Date of Splinter) – The year in which group B splintered from another group. If group B did not splinter from another group, split_yearB is left blank.

pol_party_dumB (Political Party Dummy) – Whether group B was affiliated with a political party in the year of observation (Binary). Affiliation with a political party implies that the political party shares similar political goals with the militant group and there is some evidence that the leader of the political party communicated with the leaders of the militant group. This could be a national or regional party. However, it needs to be officially recognized and eligible to run in the national parliamentary or regional or municipal elections.

pol_partyB (Political Party) – The full name of the political party affiliated with group B.

cooperation (Cooperation) – Whether group A and group B established one of the 8 types of cooperation in the year of observation (Binary)

material_coop (Material Cooperation) – Whether group A and group B established one of the 4 types of material cooperation (e.g., joint_op, joint_training, arms_funds, intel_logistic) in the year of observation (Binary)

joint_op (Joint Operations) – Whether group A and group B engaged in joint military operations in the year of observation (Binary)

joint_op_location (Location of Joint Operations) – The states/union territories of India where group A and group B engaged in joint operations in the year of observation. If the location of operations is unknown, joint_op_location is left blank.

joint_training (Joint Training) – Whether group A and group B operated joint training camps in the year of observation (Binary)

joint_training_location (Location of Joint Training Camps) – If group A and group B operated joint training camps inside India, joint_training_location denotes the states/union territories of India that hosted the camps in the year of observation. If they operated joint training camps outside India, joint_training_location indicates the foreign country that hosted the camps. If the location of training camps is unknown, joint_training_location is left blank.

arms_funds (Arms and Funds) – Whether group A and group B shared arms or funds in the year of observation (Binary)

intel_logistic (Intelligence and Logistics) – Whether group A and group B shared intelligence or provided each other logistical support in the year of observation (Binary)

nonmaterial_coop (Non-material Cooperation) – Whether group A and group B established one of the 4 types of non-material cooperation (e.g., planning_meeting, statement, umbrella, verbal) in the year of observation (Binary)

planning_meeting (Planning/Meeting) – Whether the leaders of group A and group B organized meetings or joint planning sessions in the year of observation (Binary)

statement (Joint Public Statements) – Whether group A and group B published joint public statements or press releases in the year of observation (Binary)

umbrella (Umbrella Group) – Whether group A and group B were a part of the same umbrella group in the year of observation (Binary)

verbal (Verbal Support) – Whether leaders or members of group A and group B voiced ideological support to each other in public statements, press releases, interviews or social media accounts in the year of observation (Binary)

precision_coop (Cooperation Precision) – Coded separately for each cooperation type: (1) group A and group B publicly talk about their cooperation, (2) reliable sources document cooperation between group A and group B, (3) reliable sources suspect cooperation between group A and group B, and (4) government officials or security forces allege that group A and group B cooperate without tangible proof

rivalry (Rivalry) – Whether group A and group B engaged in one of the 6 types of rivalry in the year of observation (Binary)

material_rival (Material Forms of Rivalry) – Whether group A and group B engaged in one of the 4 types of material form of rivalry in the year of observation (Binary)

clash (Armed Clashes) – Whether group A and group B engaged armed clashes against each other in the year of observation (Binary)

clash_location (Location of Armed Clashes) – If group A and group B engaged in armed clashes against each other inside India, clash_location denotes the states/union territories of India that witnessed the clashes in the year of observation. If they engaged in armed clashes against each other outside India, clash_location indicates the foreign country that witnesses the clashes. If the location of armed clashes is unknown, clash_location is left blank.

assass_abduc (Assassinations and Abductions) – Whether group A and group B engaged in assassinations or abductions targeting the militant of each other in the year of observation (Binary)

spy_helpinggov (Spying) – Whether group A and group B spied on or leaked information to the government about each other's clandestine activities in the year of observation (Binary)

nonmaterial_rival (Non-Material Forms of Rivalry) – Whether group A and group B engaged in one of the 2 types of non-material form of rivalry in the year of observation (Binary)

statement_crit (Critical Public Statements) – Whether group A and group B published public statements or press releases criticizing each other in the year of observation (Binary)

precision_rival (Rivalry Precision) – Coded separately for each rivalry type: (1) group A and group B publicly talk about their rivalry, (2) reliable sources document rivalry between group A and group B, (3) reliable sources suspect rivalry between group A and group B, and (4) government officials or security forces allege that group A and group B engage in rivalry without tangible proof

terr_dispute (Territorial dispute) – Whether group A and group B had a dispute over the control of a piece of territory in the year of observation (Binary)

defect (Militant defections) – Whether militants defected from one group to the other in the year of observation (Binary)

coop_terminate (Cooperation Termination) – Whether group A and group B terminated their cooperation in the year of observation (Binary)

gov_pressureC (Government Pressure) – Whether group A and group B terminated their cooperation due to government pressure on either group to cease its ties with other groups in the year of observation (Binary)

negotiationC (Negotiation) – Whether group A and group B terminated their cooperation because either group negotiated or signed ceasefires with government in the year of observation (Binary)

other_allyC (Other Ally) – Whether group A and group B terminated their cooperation due to either group establishing cooperative relations with a third group in the year of observation (Binary)

group_ceaseC (Group Cease Activity) – Whether group A and group B terminated their cooperation due to either group ceasing its clandestine activities in the year of observation (Binary)

begin_rival (Beginning of Rivalry) – Whether group A and group B terminated their cooperation because they became rivals in the year of observation (Binary)

rival_terminate (Rivalry Termination) – Whether group A and group B terminated their rivalry in the year of observation (Binary)

gov_pressureR (Government Pressure) – Whether group A and group B terminated their rivalry due to government pressure on either group to cease its ties with other groups in the year of observation (Binary)

negotiationR (Negotiation) – Whether group A and group B terminated their rivalry because either group negotiated or signed ceasefires with government in the year of observation (Binary)

other_rivalR (Other Ally) – Whether group A and group B terminated their rivalry due to either group engaging in rivalry with a third group in the year of observation (Binary)

group_ceaseR (Group Cease Activity) – Whether group A and group B terminated their rivalry due to either group ceasing its clandestine activities in the year of observation (Binary)

begin_coop (Beginning of Cooperation) – Whether group A and group B terminated their rivalry because they became allies in the year of observation (Binary)

IDENTIFYING THE GROUPS

The project exclusively focuses on the ethnonationalist militant groups active in the 8 North-eastern states of India (e.g., Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and Sikkim). The groups included in the FAF are comprised of both the groups identified in the UCDP/PRIO Armed Conflict Dataset (ACD) version 21.1 and groups that do not appear in the ACD due to not meeting the criterion of "25-battle related deaths".

The ACD defines an opposition organization as follows: "Any non-governmental group of people having announced a name for their group and using armed force to influence the outcome of the stated incompatibility. The UCDP only deals with formally organized opposition. The focus is on armed conflict involving consciously conducted and planned political campaigns rather than spontaneous violence". However, only those organizations that meet the above definition and cause at least 25 battle-related deaths are included in the ACD.

The data collection project defines a militant group in a similar manner but includes in the dataset those groups that did not cause 25 battle-related deaths as well. However, it does not include umbrella groups comprised of several militant groups. If the militant group is included in the UCDP Actor Dataset version 21.1, the variable group_ID is identical to the UCDP Actor Dataset ActorID. If not, group_ID is generated by the researcher.

IDENTIFYING THE TIME PERIOD

The year variable specifies the time period during which a group was active. However, the period of activity is more broadly defined that the ACD. The ACD starts coding a group after 1 battle-related death is observed and lists each conflict "in all years where fighting in one or more dyad(s) caused at least 25 battle-related deaths". In contrast, the FAF dataset lists each militant group in all years starting from the group's year of foundation until the group's year of termination regardless of whether 25 battle-related deaths were observed. If the group's foundation year is

unknown, the date of the first time the group's name was mentioned in Nexis reports is recorded as the foundation year.

Many militant groups were founded and started arms training years before they caused the first battle-related death. Similarly, many groups survive and keep their arms years after they caused the last battle-related death. Regardless they caused deaths or not in a given year, groups have opportunities to establish cooperation with or engage in rivalry against other groups. Thus, the FAF dataset codes the first year when the group was formed as the beginning of its timespan and the last year when the group existed as the end of its timespan. With this coding decision, the dataset also allows researchers to assess whether forming alliances and/or rivalries impact militant groups' lethality or their collapse and disappearance.

Moreover, the inclusion of groups in the dataset until their termination regardless of when they stopped causing 25 battle-related deaths annually is an important feature of the FAF dataset. According to the FAF dataset, the groups that are militarily active as of 2022 are KNF, ULFA, KCP, PLA, PREPAK, PREPAK - PRO, UNLF, GNLA, NSCN - IM, NSCN - K, NLFT, KYKL, ZUF, NSCN - U, and MNPF, whereas the groups that were officially disbanded prior to 2022 are PDCK, UPLA, KLNLF, NDFB - S, NDFB - RD, NDFB, ABSU, BLTF, DHD, DHD - BW, UPDS, HPC, NNC, TNV, KPLT, UPPK, UNPC, ANVC, ANVC - B, BSF, and ULFBV. The year of termination for groups that are still militarily active is indicated as 2022. The year of termination for groups that officially disbanded prior to 2022 is the year of dissolution. Apart from these cases, the coders followed specific rules to record each group's year of termination.

- If the group has not been militarily active for some time but did not officially disband, the group is considered active, and the year of termination is indicated as 2022. The groups that are considered active in this manner are KLO, ATTF, PULF, HNLC, AMEF, ASAK, LAEF, and UALA.

- If the group is in ceasefire for some time but did not officially disband, the group is considered active, and the year of termination is indicated as 2022. The groups that are considered active in this manner are KRA, NSCN - KK, APA, and NLFT - B.

- If the group signed a ceasefire agreement and then officially disbanded after an extended period, the year of dissolution is recorded as the year of termination, rather than the year of ceasefire.

- If sources mention that the group officially disbanded in the past, but the exact year of dissolution is unknown, the date of the last armed activity, according to Nexis reports, is recorded as the year of termination. The groups whose year of termination is recorded according to the last armed activity are ADF, UPDF, and KRF.

- If sources mention that the group is inactive, there is evidence that the group split into two or more factions and the exact year of dissolution is unknown, the date of the splintering, according to Nexis reports, is recorded as the year of termination. The groups whose year of termination is recorded according to the data of its splintering into numerous factions are HALC, AMLA, and NSCN.

List of Groups

United Liberation Front of Assam
All Bodo Students' Union
Bodo Liberation Tiger Force
National Democratic Front of Bodoland
National Democratic Front of Bodoland - Ranjan Daimary
National Democratic Front of Bodoland - Songbijit
Dima Halam Daogah
Dima Halam Daogah - Black Widow
United People's Democratic Solidarity
Kuki Revolutionary Army
Kangleipak Communist Party
People's Liberation Army
People's Revolutionary Party of Kangleipak
United National Liberation Front
People's United Liberation Front
Garo National Liberation Army
Hmar People's Convention
Naga National Council
National Socialist Council of Nagaland - Isaac Muivah
National Socialist Council of Nagaland - Khaplang
National Socialist Council of Nagaland - Khole Kitovi
National Socialist Council of Nagaland - Unification
All Tripura Tiger Force
National Liberation Front of Tripura
National Liberation Front of Tripura - Biswamohan
Tripura National Volunteers
Arunachal Dragon Force
United Peoples Democratic Front
Adivasi Peoples Army
Kamtapur Liberation Organisation
Karbi Longri N.C. Hills Liberation Front
Karbi People's Liberation Tigers
People's Democratic Council of Karbi-Longri
United Peoples Liberation Army
Kuki National Front
Kuki Revolutionary Front
Kanglei Yawol Kanna Lup
People's Revolutionary Party of Kangleipak – Progressive
United People's Party of Kangleipak
Manipur Naga People's Front
United Naga People's Council
Zeliangrong United Front

Hynniewtrep Achik Liberation Council
Hynniewtrep National Liberation Council
Achik Matgrik Elite Force
Achik Matgrik Liberation Army
Achik National Volunteer Council
Achik National Volunteer Council - Breakaway
Achik Songna An'pachakgipa Kotok
Liberation of Achik Elite Force
United Achik Liberation Army
National Socialist Council of Nagaland
Bodo Security Force
United Liberation Front of Barak Valley
United Liberation Front of Assam

Goodness-of-Fit Statistics

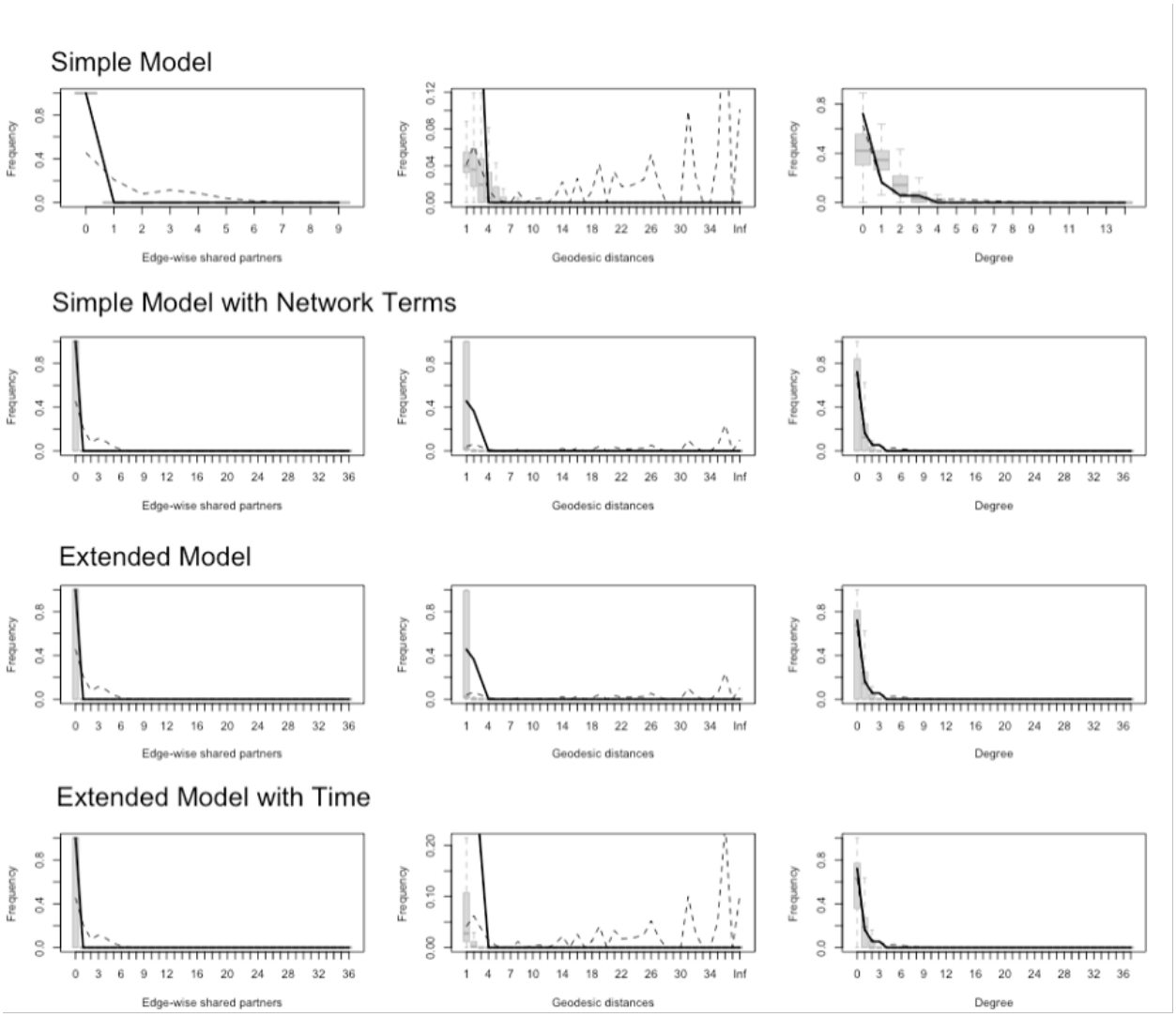


Figure A.1. Goodness-of-fit Statistics for Cooperation Models

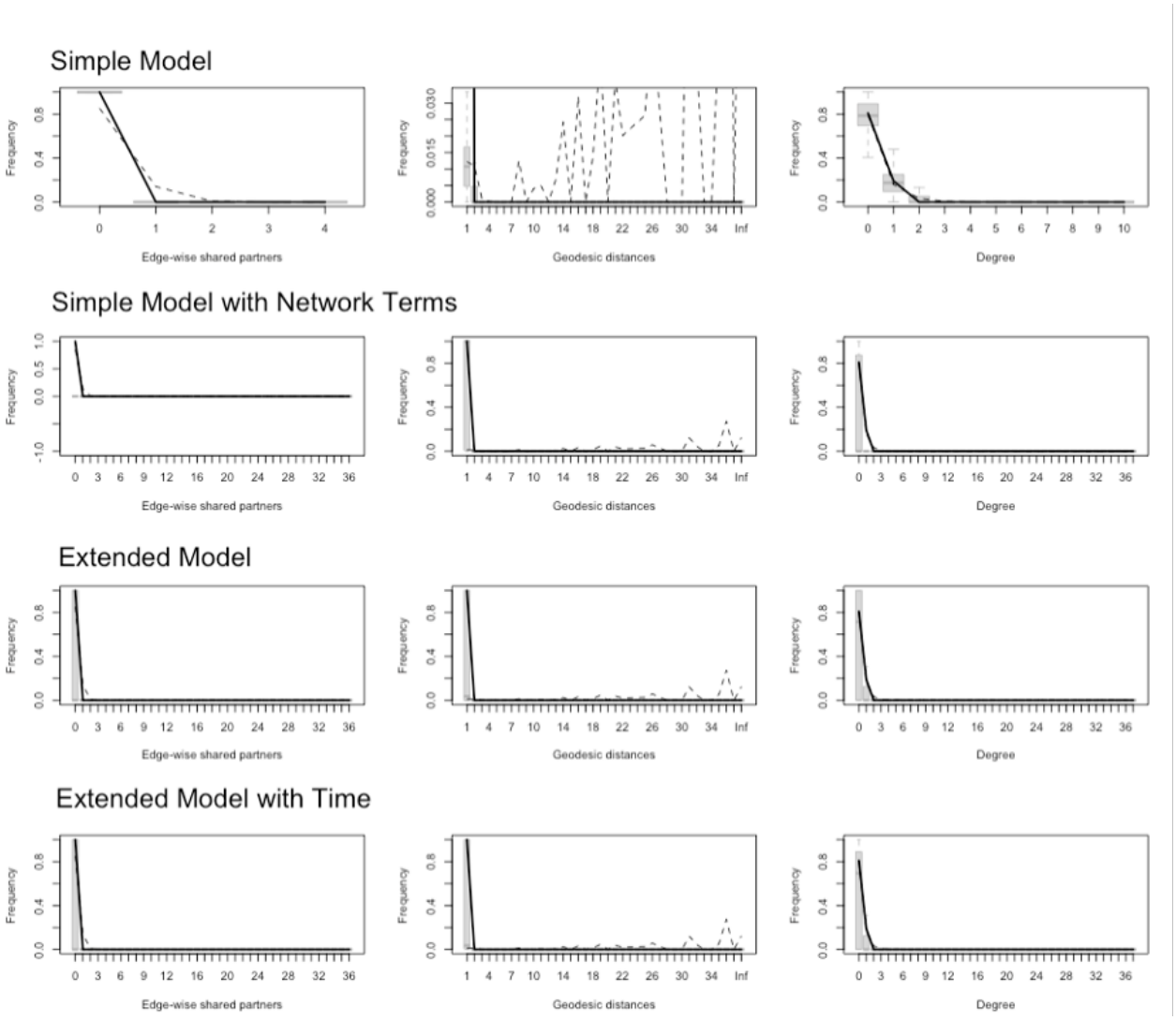


Figure A.2. Goodness-of-fit Statistics for Infighting Models

Alternative Measure of Shared Constituency

In my main TERGMs, I measure shared constituency with whether or not pairs of groups claimed to fight on behalf of the same ethnic group. Yet, constituency's identities and militant groups' conflict frames may be too complex to be only measured with ethnic proxies. As an alternative measure of shared constituency, I assess whether or not groups appeal to the same ethno-religious groups. Ethnic groups in Northeast India practice several different religions. For example, some Bodos and Dimasas practice Hinduism, whereas other Bodo and Dimasa groups adhere to Christianity.

Militant groups claiming to fight on behalf of Bodo and Dimasa ethnicities also appeal to different religious segments of these populations. For instance, Bodo Liberation Tiger Force claim to fight on behalf of Hindu Bodos, whereas the National Democratic Front of Bodoland exclusively appeal to Christian Bodos. My alternative measure of shared constituency is coded 1 if pairs of groups claimed to fight on behalf of the same ethno-religious group (i.e., Christian Bodos) and 0 otherwise. I run our TERGMs with this alternative measure. The results are comparable.

Table A.1. TERGMs of Militant Group Cooperation and Infighting in Northeast India, 1981-2021 (Alternative Measure of Shared Constituency)

	Cooperation				Infighting			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Edges	-3.41 [-3.64; -3.23]*	-4.62 [-4.89; -4.41]*	-5.17 [-5.65; -4.73]*	-3.74 [-4.38; -3.18]*	-5.44 [-5.97; -5.03]*	-6.07 [-6.48; -5.75]*	-6.32 [-7.54; 1.40]	-5.08 [-6.76; 2.69]
Shared constituency	1.27 [0.71; 1.64]*	0.98 [0.61; 1.27]*	0.73 [0.31; 1.05]*	0.78 [0.35; 1.10]*	2.33 [1.82; 2.89]*	2.48 [1.98; 2.94]*	2.04 [1.53; 2.58]*	2.10 [1.60; 2.64]*
Shared constituency and recruitment pool	-0.54 [-1.66; 0.12]	-1.01 [-2.07; -0.16]*	-1.13 [-2.32; -0.21]*	-1.03 [-2.23; -0.08]*	3.50 [3.03; 4.20]*	3.12 [2.54; 4.00]*	3.00 [2.38; 4.05]*	3.08 [2.44; 4.11]*
Node popularity		0.24 [0.19; 0.35]*	0.22 [0.17; 0.32]*	0.25 [0.21; 0.36]*		0.52 [0.34; 0.65]*	0.47 [0.22; 0.57]*	0.52 [0.31; 0.60]*
Transitivity		0.45 [0.27; 0.59]*	0.41 [0.25; 0.53]*	0.38 [0.21; 0.52]*		0.03 [-0.34; 0.37]	0.02 [-0.35; 0.36]	0.02 [-0.34; 0.37]
Shared territorial presence			0.45 [0.30; 0.63]*	0.46 [0.31; 0.64]*			1.66 [1.19; 2.25]*	1.66 [1.20; 2.23]*
Foreign state support			0.29 [0.07; 0.46]*	0.11 [-0.12; 0.28]			0.32 [-0.15; 0.76]	0.11 [-0.33; 0.54]
Joint foreign state supporter			1.15 [-0.66; 2.24]	1.01 [-0.76; 2.08]			0.85 [-13.38; 2.43]	0.82 [-13.37; 2.40]
Military capacity			-0.01 [-0.06; 0.02]	-0.01 [-0.05; 0.03]			0.05 [0.02; 0.11]*	0.05 [0.02; 0.11]*
Dyadic difference in capacity			0.03 [-0.01; 0.07]	0.02 [-0.01; 0.06]			-0.09 [-0.24; -0.02]*	-0.09 [-0.25; -0.03]*
Rhetorical affinity			0.96 [0.67; 1.35]*	1.02 [0.70; 1.41]*			-0.23 [-1.19; 0.55]	-0.14 [-1.15; 0.59]
Marxist/revolutionary ideology			0.32 [0.03; 0.58]*	0.15 [-0.15; 0.39]			0.17 [-0.30; 0.52]	0.03 [-0.44; 0.42]
Homophily: Marxist/revolutionary ideology			-0.20 [-0.61; 0.19]	-0.25 [-0.65; 0.14]			0.19 [-0.42; 0.80]	0.19 [-0.42; 0.79]
Religious-oriented ideology			0.22 [0.04; 0.41]*	0.15 [-0.04; 0.36]			-0.76 [-8.19; -0.20]*	-0.81 [-8.26; -0.23]*
Homophily: religious-oriented ideology			0.02 [-0.26; 0.28]	0.04 [-0.24; 0.30]			-0.83 [-8.26; -0.15]*	-0.80 [-8.23; -0.12]*
Time				-0.05 [-0.06; -0.03]*				-0.04 [-0.06; -0.02]*
Network-years	1981-2021	1981-2021	1981-2021	1981-2021	1981-2021	1981-2021	1981-2021	1981-2021
Dyad-years	12472	12472	12472	12472	12472	12472	12472	1247

Note: Bootstrapped pseudolikelihood estimates, as described in[106], reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. Asterisks indicate that the coefficient is statistically significant at or beyond the traditional 0.05 level.

Alternative Measure of Shared Recruitment Pool

In my main TERGMs, I measure shared recruitment pool with whether or not pairs of groups experienced militant defections. As an alternative measure of shared recruitment pool, I rely on the data we collected on territorial disputes between groups. Most militant groups fail to establish exclusive rule on a territory. Instead, many areas in armed conflicts are contested zones where militant groups can operate but lack control[107]. Groups, even those that lack full territorial control, generally have one or a few territorial strongholds where they easily survive, operate most effectively, and exercise hegemony. Militant groups' primary goal in their strongholds is turning that area into a liberated zone[108]. Such hegemony on a piece of territory has important consequences such as generating funds from extortion[109], controlling lootable resources[110], extracting information from local constituency members[111], or mass mobilizing recruits[112]. Given the importance of strongholds in mobilizing recruits, inter-group disputes over territorial strongholds can serve as a proxy for competition over the recruitment pool.

In multi-party conflicts, several militant groups may retain a presence on the same territory. Groups with shared territorial presence may or may not have strongholds in the same zone. For example, FARC (Revolutionary Armed Forces of Colombia) and ELN (National Liberation Army) both retained a presence in Colombia's central regions and along the border with Venezuela. Yet, FARC's stronghold was the Meta province[113], whereas Arauca province was known as ELN's stronghold[114]. In other examples, groups with shared territorial presence competed over a territory that both considered their stronghold. For example, the town of Tura in the West Garo Hills district of Meghalaya in India was known as the stronghold of both GNLA and ANVC-B. The competition between two groups over hegemony in Tura led ANVC-B leaders to state, "GNLA will not reign in Tura. We have no less than 50 cadres from Tura who wish to free Tura from their dominance"[115]. When its hegemony over Tura was threatened, ANVC-B, despite being militarily much weaker, challenged GNLA, suggesting that groups, irrespective of military strength, might risk infighting with other groups to preserve their stronghold.

When groups compete over strongholds, they oppose each other's presence or movement across a territory that groups consider vital to their operations or existence. When a group voiced opposition or criticism of another group's presence in an indispensable territory, we take this as evidence that the two groups strive to establish hegemony over the same territorial stronghold. For example, in 2007, NSCN-IM spokespeople stated that the group vehemently opposed ULFA cadres' movement along the border areas of Assam and Nagaland[116]. In 2011, the Achik National Volunteer Council (ANVC) gave a 20-day ultimatum to ULFA to quit operations in the Garo Hills region of Meghalaya and threatened ULFA with retaliation in case of non-compliance with the

[107](Kalyvas 2006; Aydin and Emrence 2015; Anders 2020)
[108](Aydin and Emrence 2015)
[109](Phillips 2019)
[110](Carter 2015; Dorff, Gallop and Minhas 2020)
[111](Arjona 2016)
[112](de la Calle and Sánchez-Cuenca 2015; Stewart and Liou 2017)
[113](Gonzalez and Medina Uribe 2014)
[114](BBC 2014)
[115](*Incidents And Statements Achik National Volunteer Council (ANVC): 1998-2012* 2022)
[116](Patowary 2007)

ultimatum[117]. According to the data, territorial disputes between groups do not necessarily lead to infighting. Some territorial disputes were resolved without groups' resorting to violence against each other. Moreover, when groups voice opposition or criticism of another group's presence in a territory, they do so before the infighting breaks out, suggesting that territorial dispute is not endogenous to infighting.

My alternative measure of shared recruitment pool -territorial disputes- is a binary indicator coded 1 if pairs of groups voiced opposition over each other's presence on a critical piece of territory in a given year, and 0 otherwise. I run our TERGMs with this alternative measure. The results are comparable.

Table A.2. TERGMs of Militant Group Cooperation and Infighting in Northeast India, 1981-2021 (Alternative Measure of Shared Recruitment Pool)

	Cooperation				Infighting			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Edges	-3.89 [-4.21; -3.65]*	-4.77 [-5.01; -4.58]*	-5.11 [-5.60; -4.67]*	-4.00 [-4.64; -3.40]*	-5.97 [-6.77; -5.44]*	-6.79 [-7.45; -6.32]*	-6.66 [-7.89; 1.04]	-6.20 [-7.80; 1.4
Shared constituency	2.03 [1.75; 2.28]*	1.41 [1.19; 1.58]*	1.29 [1.07; 1.50]*	1.23 [1.01; 1.43]*	2.76 [2.09; 3.61]*	3.05 [2.48; 3.76]*	2.76 [2.19; 3.60]*	2.77 [2.19; 3.60
Shared constituency and recruitment pool	-1.74 [-14.25; -0.36]*	-2.50 [-15.60; -0.42]*	-3.08 [-16.50; -0.76]*	-2.97 [-16.34; -0.70]*	4.89 [4.34; 5.70]*	4.46 [3.80; 5.51]*	4.03 [3.36; 4.97]*	4.02 [3.35; 4.96
Node popularity		0.19 [0.15; 0.27]*	0.18 [0.14; 0.25]*	0.20 [0.16; 0.29]*		0.56 [0.48; 0.71]*	0.50 [0.39; 0.62]*	0.51 [0.40; 0.63
Transitivity		0.50 [0.33; 0.64]*	0.46 [0.31; 0.57]*	0.44 [0.28; 0.56]*		0.20 [-0.19; 0.50]	0.17 [-0.19; 0.47]	0.18 [-0.20; 0.4
Shared territorial presence			0.42 [0.27; 0.58]*	0.44 [0.29; 0.61]*			1.32 [0.86; 1.81]*	1.33 [0.88; 1.82
Foreign state support			0.30 [0.10; 0.47]*	0.16 [-0.05; 0.32]			0.28 [-0.07; 0.66]	0.20 [-0.15; 0.5
Joint foreign state supporter			0.82 [-0.61; 1.85]	0.68 [-0.74; 1.70]			-1.41 [-14.60; -0.48]*	-1.42 [-14.63; -0.5
Military capacity			-0.02 [-0.06; 0.02]	-0.01 [-0.05; 0.02]			0.06 [0.04; 0.11]*	0.06 [0.04; 0.11
Dyadic difference in capacity			0.04 [0.01; 0.08]*	0.03 [-0.00; 0.07]			-0.10 [-0.31; -0.04]*	-0.10 [-0.31; -0.0
Rhetorical affinity			0.82 [0.51; 1.19]*	0.88 [0.56; 1.26]*			-0.02 [-0.89; 0.52]	0.01 [-0.87; 0.5
Marxist/revolutionary ideology			0.19 [-0.09; 0.45]	0.07 [-0.22; 0.30]			0.29 [-0.26; 0.66]	0.24 [-0.30; 0.6
Homophily: Marxist/revolutionary ideology			-0.28 [-0.68; 0.09]	-0.30 [-0.70; 0.07]			0.27 [-0.38; 0.79]	0.28 [-0.37; 0.7
Religious-oriented ideology			0.05 [-0.13; 0.24]	0.01 [-0.17; 0.20]			-1.06 [-8.35; -0.49]*	-1.07 [-8.39; -0.5
Homophily: religious-oriented ideology			-0.00 [-0.30; 0.27]	0.03 [-0.27; 0.29]			-0.98 [-8.30; -0.47]*	-0.96 [-8.29; -0.4
Time				-0.04 [-0.05; -0.02]*				-0.02 [-0.03; 0.0
Network-years	1981-2021	1981-2021	1981-2021	1981-2021	1981-2021	1981-2021	1981-2021	1981-2021
Dyad-years	12472	12472	12472	12472	12472	12472	12472	12472

Note: Bootstrapped pseudolikelihood estimates, as described in[118], reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. Asterisks indicate that the coefficient is statistically significant at or beyond the traditional 0.05 level.

[117](*For Northeast Peace, ULFA and NDFB Must Quit Garo Hills* 2011)

Alternative Control Variables

As robustness checks, I first run my TERGMs with an alternative measure of foreign state support: foreign base. Foreign base is a binary indicator coded 1 if a given group retained military bases, headquarters, or training camps in foreign country in a given year. In these alternative TERGMs, I also replace my joint foreign state supporter variable with joint foreign base country, which is coded 1 if a given pair of groups retained bases in the same country (or countries) in a given year. The results are comparable.

Secondly, I run my TERGMs with an alternative measure of groups' military capacity: age. Group age can proxy capacity as younger groups that are still trying to organize and extend their resource mobilization capacity are unlikely to be capable. Age is a discrete continuous variable coded 1 for the year that the group was founded. It incrementally increases over time. The models run with this alternative measure of group capacity yield comparable results.

Finally, I run my TERGMs with our original measures and add an additional control variable: splinter group. Groups that emerged as splinter factions from pre-existing organizations may be more to infighting. Splinter group is a binary indicator coded 1 if a given group emerged by splintering from another group. The results are robust to controlling for splinter history.

Table A.3. TERGMs of Militant Group Cooperation and Infighting in Northeast India, 1981-2021 (With Foreign Base)

	Cooperation		Infighting	
	Model 1	Model 2	Model 3	Model
Edges	-5.14 [-6.00; -4.46]*	-3.57 [-4.54; -2.86]*	-7.48 [-38.09; 0.50]	-6.43 [-37.1
Shared constituency	1.21 [0.97; 1.45]*	1.13 [0.87; 1.37]*	2.20 [1.67; 2.86]*	2.21 [1.68;
Shared constituency and recruitment pool	-0.94 [-2.06; -0.18]*	-0.76 [-1.89; 0.01]	3.02 [2.46; 3.90]*	3.07 [2.52;
Node popularity	0.17 [0.13; 0.25]*	0.20 [0.16; 0.27]*	0.50 [0.29; 0.61]*	0.53 [0.32;
Transitivity	0.43 [0.24; 0.56]*	0.40 [0.22; 0.54]*	0.03 [-0.37; 0.38]	0.03 [-0.35
Shared territorial presence	0.50 [0.34; 0.69]*	0.53 [0.36; 0.71]*	1.61 [1.15; 2.15]*	1.61 [1.17;
Foreign base	0.00 [-0.27; 0.32]	-0.20 [-0.42; 0.11]	0.48 [-0.22; 15.60]	0.34 [-0.31;
Joint foreign base country	1.12 [0.93; 1.41]*	1.09 [0.89; 1.38]*	0.34 [-0.23; 0.83]	0.28 [-0.28
Military capacity	-0.01 [-0.05; 0.02]	-0.00 [-0.04; 0.03]	0.05 [0.02; 0.11]*	0.05 [0.02;
Dyadic difference in capacity	0.02 [-0.01; 0.06]	0.02 [-0.01; 0.06]	-0.11 [-0.27; -0.04]*	-0.11 [-0.28;
Rhetorical affinity	0.55 [0.18; 0.95]*	0.65 [0.27; 1.05]*	-0.35 [-1.23; 0.35]	-0.28 [-1.19
Marxist/revolutionary ideology	0.10 [-0.20; 0.37]	-0.03 [-0.33; 0.22]	0.07 [-0.42; 0.46]	0.00 [-0.52
Homophily: Marxist/revolutionary ideology	-0.18 [-0.58; 0.22]	-0.22 [-0.62; 0.18]	0.15 [-0.45; 0.70]	0.15 [-0.45
Religious-oriented ideology	-0.02 [-0.24; 0.20]	-0.07 [-0.29; 0.13]	-0.80 [-8.24; -0.24]*	-0.84 [-8.29;
Homophily: religious-oriented ideology	0.01 [-0.28; 0.28]	0.04 [-0.24; 0.31]	-0.66 [-8.11; -0.04]*	-0.65 [-8.10;
Time		-0.04 [-0.05; -0.03]*		-0.03 [-0.05;
Network-years	1981-2021	1981-2021	1981-2021	1981-20
Dyad-years	12472	12472	12472	12472

Note: Bootstrapped pseudolikelihood estimates, as described in[119], reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. Asterisks indica the coefficient is statistically significant at or beyond the traditional 0.05 level.

Multinomial Logit Models

Although a network analysis is more suitable for testing hypotheses regarding militant group cooperation and infighting, to ensure that my findings are not driven by my modeling approach, my also run multinomial logit models on my dyadic dataset consisting of 12472 dyad-years.

In multinomial logit models, I treat inter-group relations as a categorical dependent variable with three categories: non-engagement, cooperation, and rivalry. The multinomial logit models presented and the predicted probability plots show that my main findings are robust to using alternative modeling approaches. The highest likelihood of cooperation is when groups have a shared constituency and different recruitment pools. In contrast, a shared recruitment pool markedly increases the risk of infighting.

Table A.4. TERGMs of Militant Group Cooperation and Infighting in Northeast India, 1981-2021 (With Group Age)

	Cooperation		Infighting	
	Model 1	Model 2	Model 3	Model
Edges	-4.69 [-5.27; -4.14]*	-3.86 [-4.54; -3.22]*	-7.10 [-8.33; 0.50]	-6.00 [-7.51
Shared constituency	1.23 [1.00; 1.43]*	1.20 [0.98; 1.40]*	2.40 [1.83; 3.11]*	2.43 [1.85;
Shared constituency and recruitment pool	-1.17 [-2.31; -0.39]*	-1.11 [-2.30; -0.28]*	3.01 [2.45; 3.88]*	3.03 [2.49;
Node popularity	0.18 [0.14; 0.27]*	0.21 [0.17; 0.29]*	0.48 [0.28; 0.61]*	0.51 [0.32;
Transitivity	0.45 [0.30; 0.57]*	0.43 [0.27; 0.56]*	0.03 [-0.38; 0.39]	0.06 [-0.34
Shared territorial presence	0.42 [0.25; 0.59]*	0.42 [0.26; 0.58]*	1.65 [1.20; 2.20]*	1.67 [1.25;
Foreign state support	0.24 [0.03; 0.39]*	0.14 [-0.07; 0.31]	0.30 [-0.10; 0.73]	0.12 [-0.29
Joint foreign state supporter	0.65 [-1.24; 1.75]	0.54 [-1.32; 1.64]	-0.13 [-14.22; 1.17]	-0.27 [-14.3
Group age	-0.01 [-0.02; -0.00]*	-0.00 [-0.01; 0.01]	0.00 [-0.01; 0.02]	0.02 [0.00;
Dyadic difference in age	-0.01 [-0.02; 0.00]	-0.00 [-0.02; 0.01]	0.02 [-0.00; 0.03]	0.02 [0.00;
Rhetorical affinity	0.83 [0.53; 1.21]*	0.88 [0.57; 1.25]*	-0.43 [-1.27; 0.22]	-0.36 [-1.20
Marxist/revolutionary ideology	0.29 [-0.05; 0.59]	0.04 [-0.30; 0.34]	-0.04 [-0.53; 0.35]	-0.35 [-0.83
Homophily: Marxist/revolutionary ideology	-0.32 [-0.73; 0.07]	-0.32 [-0.72; 0.06]	0.32 [-0.29; 0.93]	0.39 [-0.22
Religious-oriented ideology	0.06 [-0.15; 0.29]	-0.04 [-0.24; 0.18]	-0.88 [-8.14; -0.32]*	-0.98 [-8.23;
Homophily: religious-oriented ideology	0.02 [-0.28; 0.28]	0.03 [-0.26; 0.29]	-0.69 [-7.93; -0.05]*	-0.68 [-7.90;
Time		-0.03 [-0.05; -0.02]*		-0.05 [-0.08;
Network-years	1981-2021	1981-2021	1981-2021	1981-20
Dyad-years	12472	12472	12472	12472

Note: Bootstrapped pseudolikelihood estimates, as described in[120], reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. Asterisks indica the coefficient is statistically significant at or beyond the traditional 0.05 level.

Seemingly Unrelated Regression Models

As another robustness check, I run seemingly unrelated regression models using my dyadic dataset of 12472 dyad-years. Seemingly unrelated regression models is a generalization of linear regression models that consist of several regression equations, each having its own dependent variable and set of predictors[122]. Although each equation is a valid regression model on its own, they are simultaneously estimated by assuming that error terms are correlated across the equations. Using a seemingly unrelated regression approach, I model the likelihood of observing inter-group (1) cooperation and (2) infighting. My seemingly unrelated regression results are comparable to the ones presented in the paper.

[122](Zellner 1962)

Table A.5. TERGMs of Militant Group Cooperation and Infighting in Northeast India, 1981-2021 (With Splinter Group Control)

	Cooperation		Infighting	
	Model 1	Model 2	Model 3	Model
Edges	-5.12 [-5.67; -4.65]*	-4.02 [-4.67; -3.43]*	-6.45 [-7.85; 1.26]	-5.82 [-7.53
Shared constituency	1.31 [1.08; 1.53]*	1.24 [1.00; 1.46]*	2.29 [1.71; 3.00]*	2.28 [1.70;
Shared constituency and recruitment pool	-1.23 [-2.40; -0.44]*	-1.07 [-2.22; -0.25]*	2.99 [2.47; 3.88]*	3.03 [2.51;
Node popularity	0.18 [0.14; 0.25]*	0.20 [0.16; 0.29]*	0.50 [0.30; 0.62]*	0.53 [0.33;
Transitivity	0.46 [0.30; 0.57]*	0.44 [0.27; 0.56]*	0.05 [-0.34; 0.40]	0.05 [-0.34
Shared territorial presence	0.41 [0.26; 0.59]*	0.44 [0.29; 0.61]*	1.57 [1.14; 2.11]*	1.57 [1.16;
Foreign state support	0.30 [0.10; 0.45]*	0.14 [-0.06; 0.30]	0.27 [-0.14; 0.68]	0.16 [-0.24
Joint foreign state supporter	0.67 [-1.24; 1.76]	0.53 [-1.36; 1.61]	-0.18 [-14.36; 1.18]	-0.25 [-14.38
Military capacity	-0.02 [-0.06; 0.02]	-0.01 [-0.05; 0.02]	0.06 [0.03; 0.12]*	0.06 [0.03;
Dyadic difference in capacity	0.04 [0.00; 0.08]*	0.03 [0.00; 0.07]*	-0.10 [-0.26; -0.04]*	-0.11 [-0.27;
Rhetorical affinity	0.83 [0.51; 1.21]*	0.90 [0.57; 1.28]*	-0.29 [-1.16; 0.42]	-0.24 [-1.11
Marxist/revolutionary ideology	0.21 [-0.05; 0.47]	0.11 [-0.16; 0.35]	0.01 [-0.52; 0.43]	-0.03 [-0.57
Homophily: Marxist/revolutionary ideology	-0.25 [-0.64; 0.12]	-0.27 [-0.67; 0.10]	0.14 [-0.50; 0.76]	0.14 [-0.51
Religious-oriented ideology	0.04 [-0.16; 0.25]	-0.02 [-0.22; 0.20]	-0.77 [-8.07; -0.23]*	-0.80 [-8.09;
Homophily: religious-oriented ideology	-0.00 [-0.31; 0.27]	0.03 [-0.27; 0.30]	-0.70 [-8.03; -0.04]*	-0.68 [-8.01;
Splinter group	0.02 [-0.13; 0.18]	0.11 [-0.06; 0.26]	-0.30 [-0.69; 0.08]	-0.23 [-0.65
Homophily: splinter history	-0.05 [-0.27; 0.15]	-0.08 [-0.30; 0.12]	0.15 [-0.38; 0.71]	0.14 [-0.39
Time		-0.04 [-0.05; -0.03]*		-0.02 [-0.04
Network-years	1981-2021	1981-2021	1981-2021	1981-20
Dyad-years	12472	12472	12472	12472

Note: Bootstrapped pseudolikelihood estimates, as described in[121], reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. Asterisks indica the coefficient is statistically significant at or beyond the traditional 0.05 level.

Latent Space Models

I also estimate latent space models on my network at the year 2015. The year is selected based on the large number of actors present in the network. My estimations of bilinear latent models with two dimensions are presented below and the minimum Kullback-Leibler positions of my extended models are presented in the figure.

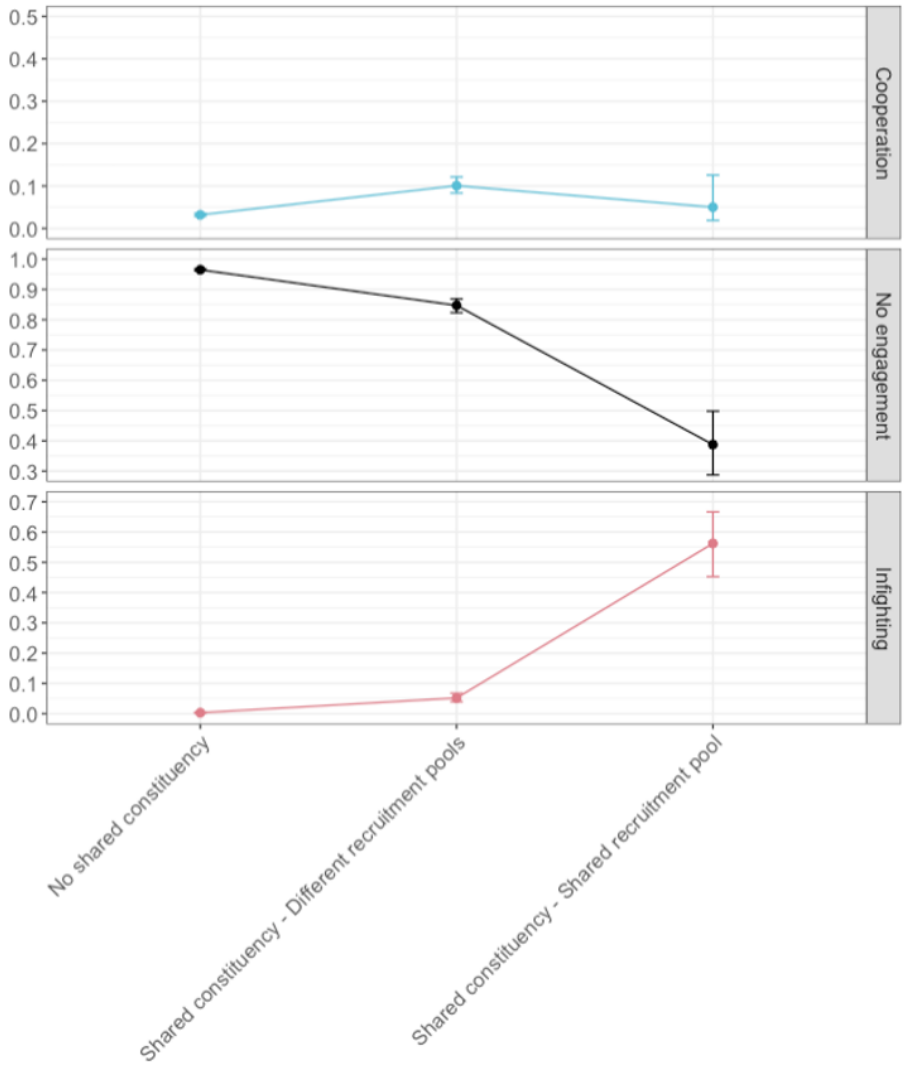


Figure A.3. Predicted Probabilities of Cooperation and Infighting in Militant Networks

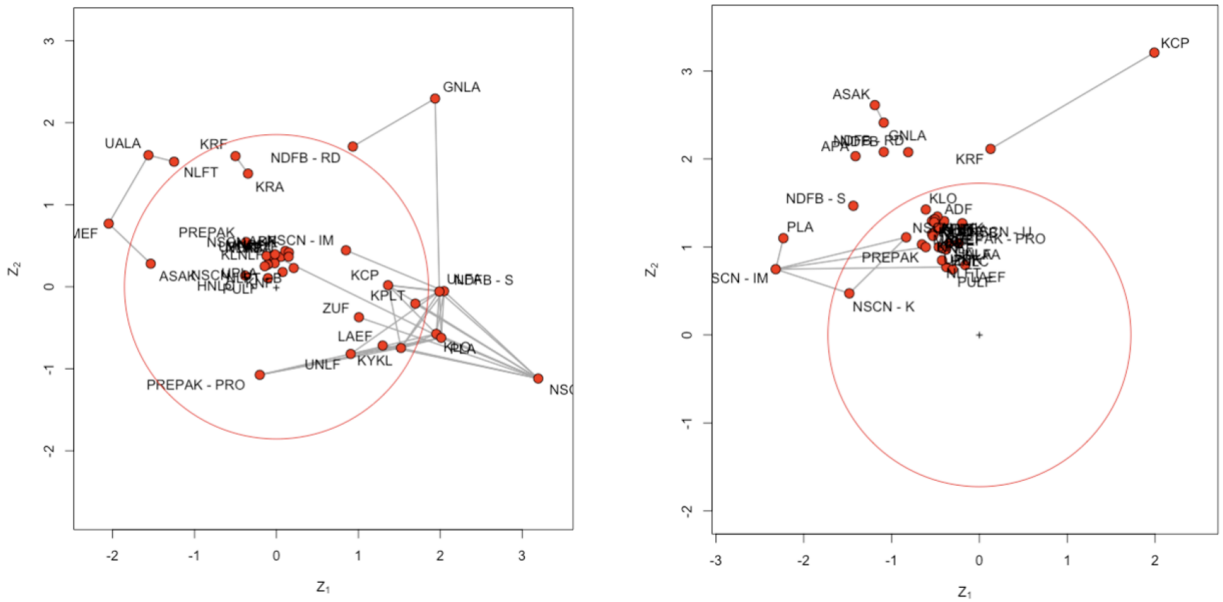
Table A.6. Multinomial Logit Models of Militant Group Cooperation and Infighting in Northeast India, 1981-2021)

	Simple		Extended		Extended with controls	
	Cooperation	Infighting	Cooperation	Infighting	Cooperation	Infighting
Intercept	-3.41 (0.05)***	-5.73 (0.17)***	-5.66 (0.13)***	-8.45 (0.39)***	-6.75 (0.25)***	-9.67 (0.64)***
Shared constituency	1.28 (0.12)***	2.93 (0.22)***	1.40 (0.16)***	4.24 (0.34)***	1.14 (0.22)***	3.88 (0.38)***
Shared recruitment pool	1.36 (0.53)**	6.10 (0.29)***	1.38 (0.63)**	6.28 (0.41)***	1.20 (0.68)*	5.89 (0.45)***
Number of allies (Group A)			0.50 (0.02)***	-0.01 (0.06)	0.59 (0.03)***	0.02 (0.08)
Number of allies (Group B)			0.43 (0.02)***	0.26 (0.05)***	0.39 (0.03)***	0.27 (0.07)***
Number of rivals (Group A)			-0.06 (0.07)	0.92 (0.07)***	-0.18 (0.09)**	0.94 (0.09)***
Number of rivals (Group B)			0.19 (0.05)***	0.88 (0.06)***	0.04 (0.07)	1.02 (0.09)***
Shared territorial presence					0.48 (0.12)***	1.27 (0.33)***
State support (Group A)					0.58 (0.24)**	1.24 (0.47)**
State support (Group B)					0.83 (0.16)***	1.25 (0.47)**
Joint State supporter					0.24 (0.53)	-0.33 (1.30)
Military capacity (Group A)					0.01 (0.01)	-0.04 (0.03)
Military capacity (Group B)					0.03 (0.01)**	0.04 (0.03)
Dyadic difference in capacity					-0.05 (0.01)***	-0.04 (0.04)
Rhetorical affinity					0.56 (0.17)***	-1.17 (0.87)
Left-wing ideology (Group A)					-0.60 (0.18)***	-0.29 (0.40)
Left-wing ideology (Group B)					0.90 (0.18)***	-1.03 (0.42)**
Left-wing ideological homophily					0.32 (0.16)**	0.35 (0.34)
Religious ideology (Group A)					0.38 (0.15)**	0.31 (0.32)
Religious ideology (Group B)					0.51 (0.18)**	-0.31 (0.32)
Religious ideological homophily					0.00 (0.14)	0.57 (0.30)*
AIC	4895.34	4895.34	3112.33	3112.33	2937.19	2937.19
BIC	4939.94	4939.94	3216.40	3216.40	3249.39	3249.39

Note: In every model, the reference category for the dependent variable is non-engagement between groups.

Table A.7. Seemingly Unrelated Models of Militant Group Cooperation and Infighting in Northeast India, 1981-2021)

	Simple		Extended		Extended with controls	
	Cooperation	Infighting	Cooperation	Infighting	Cooperation	Infighting
Intercept	0.03 (0.00)***	0.00 (0.00)***	-0.03 (0.00)***	-0.01 (0.00)***	-0.07 (0.01)***	-0.00 (0.00)
Shared constituency	0.07 (0.01)***	0.05 (0.00)***	0.06 (0.01)***	0.05 (0.00)***	0.04 (0.01)***	0.05 (0.00)***
Shared recruitment pool	-0.04 (0.02)*	0.51 (0.01)***	-0.07 (0.02)***	0.45 (0.01)***	-0.04 (0.02)**	0.33 (0.01)***
Number of allies (Group A)			0.03 (0.00)***		0.03 (0.00)***	
Number of allies (Group B)			0.02 (0.00)***		0.02 (0.00)***	
Number of rivals (Group A)				0.03 (0.00)***		0.03 (0.00)***
Number of rivals (Group B)				0.02 (0.00)***		0.02 (0.00)***
Shared territorial presence					0.01 (0.00)**	0.00 (0.00)*
State support (Group A)					0.01 (0.01)	0.01 (0.00)***
State support (Group B)					0.03 (0.01)***	0.00 (0.00)
Joint State supporter					0.03 (0.03)	-0.00 (0.01)
Military capacity (Group A)					0.00 (0.00)***	-0.00 (0.00)**
Military capacity (Group B)					0.00 (0.00)***	0.00 (0.00)**
Dyadic difference in capacity					-0.01 (0.00)***	-0.00 (0.00)*
Rhetorical affinity					0.10 (0.01)***	
Rhetorical rivalry						0.32 (0.01)***
Left-wing ideology (Group A)					-0.01 (0.00)*	-0.01 (0.00)**
Left-wing ideology (Group B)					0.04 (0.00)***	-0.02 (0.00)***
Left-wing ideological homophily					0.04 (0.00)***	-0.02 (0.00)***
Religious ideology (Group A)					-0.00 (0.00)	0.00 (0.00)**
Religious ideology (Group B)					0.01 (0.00)**	0.00 (0.00)
Religious ideological homophily					-0.00 (0.00)	0.01 (0.00)**
R-squared	0.01	0.21	0.20	0.28	0.23	0.34
Adjusted R-squared	0.01	0.21	0.20	0.28	0.23	0.34



(a) Cooperation (Model 2)

(b) Infighting (Model 4)

Figure A.4. MLK Positions of Bilinear Latent Models with Two Dimensions

Table A.8. Latent Space Models of Militant Group Cooperation and Infighting in Northeast India, 2015

	Cooperation			Infighting
	Model 1	Model 2	Model 3	Mo
Intercept	-6.91 [-9.32; -5.24]*	-7.67 [-11.41; -3.87]*	-8.64 [-11.93; -6.13]*	-8.04 [-12
Shared constituency	3.60 [1.94; 5.52]*	3.66 [0.98; 6.81]*	1.93 [-1.15; 5.00]	2.27 [-3
Shared constituency and recruitment pool	-4.85 [-10.86; -0.33]*	-4.22 [-10.04; 0.04]	5.61 [1.95; 10.25]*	12.09 [4
Shared territorial presence		0.52 [-1.58; 2.72]		1.99 [-
Foreign state support		-0.24 [-4.52; 3.37]		-4.18 [-1
Military capacity		-0.13 [-0.39; 0.03]		-0.11 [-
Dyadic difference in capacity		0.09 [-0.11; 0.33]		-0.27 [-
Rhetorical affinity		6.68 [3.52; 11.39]*		-15.14 [-3
Marxist/revolutionary ideology		-2.65 [-7.68; 1.14]		0.11 [-
Homophily: Marxist/revolutionary ideology		-1.27 [-4.15; 1.47]		-0.84 [-
Religious-oriented ideology		-1.23 [-4.05; 0.86]		-2.12 [-
Homophily: religious-oriented ideology		0.89 [-0.97; 3.00]		-2.30 [-
Network-years	2015	2015	2015	2
Dyad-years	630	630	630	6
BIC (Overall)	321.06	330.35	284.17	28
BIC (Likelihood)	91.69	101.46	26.74	3
BIC (Latent positions)	229.37	228.89	257.43	25

Note: Asterisks indicate that the coefficient is statistically significant at or beyond the traditional 0.05 level.