# Conceptualizing and Analyzing Different Forms of Militant Alliance Networks

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**Abstract**

Cooperation among militant organizations takes diverse forms that extend beyond the conventional material vs. rhetorical dichotomy. In this study, I propose a 2×2 typology of militant cooperation, structured along two key dimensions: power redistribution and interdependence. This framework classifies different forms of cooperation—including rhetorical support, arms and funds exchanges, training, intelligence-sharing, and logistical support—based on the extent to which they reshape dyadic power dynamics and create interdependence between allies. Using this typology, I develop a theoretical framework that integrates commitment problems, principal-agent dynamics, signaling, and contracting theories to explain why militant groups engage in different forms of cooperation. I test my propositions using social network analysis tools on an original, disaggregated, time-series, directional network dataset covering 53 Northeast Indian militant groups from 1981 to 2021. My findings reveal that cooperation involving major power redistribution, such as training and intelligence-sharing, is primarily driven by balance of power concerns, as stronger groups seek asymmetric partnerships to mitigate risks associated with delegation and oversight. In contrast, cooperation with minor redistributive consequences, such as rhetorical support, is primarily motivated by ideological alignment, as groups signal affiliation without committing to costly material exchanges. These results clarify contradictory findings in the literature by demonstrating that different logics drive different forms of cooperation. This study advances the analysis of militant alliances by emphasizing the need to disaggregate cooperation types to gain more precise insights into inter-group relations in multiparty conflict environments.

**Keywords**: multiparty conflicts, militant cooperation, alliance formation, principal-agent theory, social network analysis

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# Introduction

The fragmentation of militant movements and cooperation among militant factions play a crucial role in shaping the dynamics of multiparty conflict systems[1]. Cooperation between militant groups influences organizational survival, operational effectiveness, and strategic outcomes, enabling groups to recover from leadership losses[2], survive longer[3], and increase lethality[4]. For instance, the alliances that the Taliban forged with its former rivals, including Hizb-e Islami and Hizb-e Wahdat, have been identified as a critical factor behind the Taliban's rapid takeover of Afghanistan following the withdrawal of U.S. troops[5].

Scholarly work on militant alliances has traditionally examined *why* groups cooperate. A central argument is that cooperation emerges when militant organizations seek to aggregate military capabilities to increase their chances of victory, particularly in response to government repression[6]. More recent research has focused on *with whom* groups cooperate, emphasizing the complexity of multiparty conflicts, which often involve dozens or even hundreds of armed groups, as seen in Syria's civil war[7]. However, an important and largely underexplored question concerns *how* militant groups cooperate—what forms their alliances take, what costs they impose, and what strategic calculations shape their design[8].

Existing typologies of militant cooperation have distinguished between material vs. rhetorical cooperation[9], formal alliances vs. incidental cooperation[10], and military vs. political alliances[11]. However, these distinctions fail to capture the strategic variation in the depth, costs, and risks associated with different forms of cooperation. Studies on inter-state alliances have long recognized that alliances differ in their scope, degree of commitment, and power redistribution effects[12]. Mili-

[1](Bakke, Cunningham and Seymour 2012; Cunningham, Bakke and Seymour 2012; Seymour, Bakke and Cunningham 2016)
[2](Price 2012)
[3](Phillips 2014)
[4](Horowitz and Potter 2014)
[5](Giustozzi 2021)
[6](Lichbach 1995; Akcinaroglu 2012; Christia 2012; McLauchlin and Pearlman 2012; Phillips 2014)
[7](Gade et al. 2019; Bapat and Bond 2012; Asal et al. 2016; Bacon 2018; Popovic 2018)
[8](Steinwand and Metternich 2022; Blair et al. 2022; Balcells, Chen and Pischedda 2022; Bolte 2022)
[9](Christia 2012; Blair et al. 2022)
[10](Akcinaroglu 2012; Balcells, Chen and Pischedda 2022)
[11](Bolte 2022)
[12](Russett 1971; Leeds et al. 2002; Mattes 2012; Benson and Clinton 2016)

tant alliances exhibit similar variation in ways that are not captured by existing works. The United Liberation Front of Asom (ULFA) forged an expansive alliance with Kamtapur Liberation Organisation (KLO), imparting training to KLO cadres in advanced weaponry and explosives[13]. KLO, in exchange, provided sanctuary to ULFA cadres after Bhutan's crackdown on ULFA's safe havens[14]. Interestingly, ULFA's decades-long cooperation with the All-Tripura Tiger Force (ATTF) remained limited to selling weapons and ammunition to ATTF[15]. Why does cooperation between one pair of groups look so different from that between another?

To address this gap, I introduce a theoretical typology of militant group cooperation based on two key dimensions: *power redistribution* (e.g., does cooperation significantly alter the balance of power between groups?) and *interdependence* (e.g., does cooperation create mutual dependence between allies?). These two dimensions generate four analytically distinct forms of cooperation, each aligning with well-established theoretical frameworks in the study of alliance formation in IR. *Signaling* frameworks inform rhetorical support, in which groups publicly align with each other but avoid material commitments. The logic of *contracting* explains arms and funds exchanges, where groups engage in mutually beneficial transactions that require self-enforcement mechanisms. Concerns about *commitment* problems emerge when a stronger actor provides unilateral support (e.g., military resources) to a weaker actor without mechanisms to ensure continued alignment between the partners. Finally, *principal-agent* frameworks inform cooperation involving training and intelligence-sharing, where a benefactor provides expertise but must mitigate risks associated with delegation and oversight.

Building on this typology, I propose a theoretical framework to explain why groups select specific forms of cooperation. I argue that three factors shape militant cooperation: (1) Power Disparity, which influences whether stronger actors prefer asymmetric partnerships to mitigate the risks associated with principal-agent dynamics; (2) Ideational Alignment, which facilitates the signaling of allegiance in the form of rhetorical cooperation; and (3) Asymmetric Complementarity, where groups with distinct but complementary capabilities are more likely to engage in high interdependence cooperation that involve commitment and principal-agent problems.

To test these hypotheses, I employ Temporal Exponential Random Graph Models (TERGMs)

[13](Banerjee 1999)
[14](Banerjee 2002)
[15](Kalita 2011)

on an original, time-series, directional network dataset encompassing 53 ethnonationalist militant groups in Northeast India from 1981 through 2021. Existing datasets on militant cooperation tend to overlook weaker groups, fail to disaggregate different forms of cooperation, and lack directional data[16]. My dataset addresses these gaps by documenting eight distinct forms of cooperation and explicitly identifying the sender and receiver of support in each dyadic interaction. My network analysis approach enables me to assess the impact of exogenous covariates while also accounting for the effects of endogenous network structure. Strategic actors do not form their alliance decisions in a vacuum; instead, they take into account the alliance portfolios of other actors in their conflict system[17]. The influence of network structure on groups' propensity to form alliances makes network analysis approaches more suitable tools to study militant cooperation than conventional statistical analysis, which relies on the assumption of independence of observations.

My empirical evidence uncovers distinct patterns regarding not only the composition of militant alliances, that is *with whom* militants cooperate, but also the nature of cooperative arrangements, that is *how* exactly they cooperate. Power disparity predicts cooperation in training and intelligence-sharing, consistent with the logic of principal-agent dynamics. Ideational alignment predicts rhetorical support, reinforcing the role of signaling in the formation of alliances with minor power redistributive consequences. Complementarity increases the likelihood of high interdependence cooperation, both in the form of arms/funds exchanges and training/intelligence-sharing. Furthermore, I demonstrate that collapsing different forms of cooperation into a single measure obscures these relationships, underscoring the importance of disaggregating militant alliances.

This study advances our understanding of militant cooperation by moving beyond simplistic material vs. rhetorical distinctions and demonstrating how power dynamics and interdependence shape the design and durability of militant alliances. By integrating established theoretical frameworks into the study of militant cooperation, I provide a more structured approach to analyzing how militant groups choose between rhetorical coordination, resource exchanges, and deep operational collaboration in multiparty conflict environments. My results contextualize and clarify many of the contradictory findings in the literature. For instance, while some extant works find evidence that groups with compatible aspirations forge cooperative ties[18], others document that they

[16](Blair et al. 2022; Balcells, Chen and Pischedda 2022)
[17](Cranmer, Desmarais and Menninga 2012; Cranmer, Desmarais and Kirkland 2012)
[18](Bacon 2018; Gade et al. 2019; Balcells, Chen and Pischedda 2022; Blair et al. 2022)

are prone to competition[19]. I find that compatible aspirations increase the likelihood of rhetorical support, but not the exchange of materials or know-how. Thus, my findings suggest that the previous contradictory findings may be due to not adequately distinguishing between different forms of cooperation.

## Toward a Typology of Militant Cooperation

Militant groups, like states, operate under conditions of anarchy, characterized by the absence of overarching central authority[20]. Although joint foreign state supporters may try to oversee the interactions between militant groups[21], foreign principals rarely have complete control over militant agents[22]. When forming cooperative arrangements among each other under anarchy, groups face several costs[23]. Different forms of cooperation likely imply different costs, that is to say militant cooperation types vary in terms of the nature and amount of costs they impose on groups. Through extensive review of literatures on alliance-building under anarchy, I identified two dimensions across which the nature and amount of cooperation costs vary, specifically, the extent of power redistributive consequences and the degree of interdependency. I build my typology of cooperation among militant groups on these two dimensions.

### *Power Redistributive Consequences*

The first dimension I consider in my typology is whether cooperation between a pair of groups has the potential to significantly alter the dyadic balance of power. The distribution of power within militant alliances influences both the incentives for cooperation and the risks associated with sustaining these relationships over time. Militarily weaker organizations seek partnerships with more capable actors to augment their operational effectiveness, gain access to resources, or improve their strategic position within a broader conflict environment[24]. Yet, any prospective partner must weigh the costs associated with resource transfers, bargaining over the terms of cooperation, and

[19](Pischedda 2018; Phillips 2019; Pischedda 2020)
[20](Vinci 2008)
[21](Popovic 2018)
[22](Salehyan, Gleditsch and Cunningham 2011)
[23](Bapat and Bond 2012; Christia 2012; Zeigler 2016; Bacon 2017)
[24](Asal and Rethemeyer 2008; Horowitz and Potter 2014; Horowitz, Perkoski and Potter 2018; Blair et al. 2022)

the potential long-term consequences of redistributing power within an alliance[25]. As cooperation reshapes relative capabilities, it may also generate uncertainty about the durability of the initial agreement, particularly if one party perceives a growing imbalance as a future threat to its interests.

Cooperation that significantly alters the dyadic balance of power introduces strategic risks that have come to be known as *commitment* problems and *principal-agent* problems. *Commitment* problems may arise in militant alliances when an actor provides material support to a weaker ally but lacks the ability to ensure future alignment. In fragmented conflict environments, where alliances are fluid and strategic interests evolve over time, a benefactor may strengthen a partner to advance immediate objectives but later find itself unable to prevent defection or betrayal once the recipient has accrued sufficient strength. Without mechanisms to credibly commit to maintaining cooperation, or to constrain an ally's ability to shift allegiances, the provision of military resources or financial assistance may create long-term vulnerabilities for the benefactor[26].

While *commitment* problems stem from the uncertainty of future alignment, *principal-agent* dynamics emerge when a stronger actor attempts to oversee and direct the actions of a weaker partner but lacks the ability to fully control how support is utilized. Cooperation involving the transfer of tactical expertise, intelligence-sharing, or battlefield coordination requires a delegation of authority, in which the benefactor entrusts an ally with capabilities that may be applied in unintended ways. This delegation problem introduces risks of moral hazard, as the recipient retains decision-making autonomy and may use its newly acquired resources in ways that diverge from the benefactor's strategic objectives[27]. A group providing specialized military training, for example, may enhance an ally's operational effectiveness but has little recourse if that ally later employs its capabilities in a manner inconsistent with the provider's interests. The challenge of ensuring compliance without direct enforcement mechanisms complicates cooperation that involves power redistribution, requiring actors to weigh the risks of potential divergence against the expected benefits of alliance formation.

Not all cooperative arrangements result in meaningful redistributive consequences, though. When groups engage in rhetorical support or limited resource-sharing, power dynamics within

[25](Balcells, Chen and Pischedda 2022)
[26](Fearon 1995; Powell 2006)
[27](Mitchell 2004; Salehyan 2011)

the alliance remain largely unchanged, minimizing concerns over future defection or oversight. However, when cooperation entails substantial resource transfers, training, or the exchange of advanced operational knowledge, the recipient can significantly expand its resource pool, enhance its military capabilities, and develop its technological know-how[28].

### *Interdependency*

The second dimension in my typology is whether cooperation has the potential to create interdependency between allies. I define interdependency as "mutual vulnerability, where two actors find themselves in a relationship that would create large costs for both of them should it break down"[29]. Like the balance of power, interdependency influences the bargaining dynamics over the reallocation of authority, control, and resources within alliances. When militant groups become highly interdependent, they develop shared interests in maintaining cooperation, which can promote stability by encouraging compromise, mediation, and conflict resolution[30]. At the same time, interdependence necessitates coordination and concession, potentially leading to a loss of autonomy[31]. The prospect of surrendering operational flexibility may make groups hesitant to enter deeply interdependent relationships, particularly when there is uncertainty regarding their partner's long-term reliability.

The extent of interdependence in militant cooperation varies according to the structure of resource-sharing and the mechanisms used to sustain agreements. Some forms of cooperation involve symbolic or non-material commitments that allow groups to maintain autonomy while demonstrating alignment to external actors. These arrangements conform to the logic of *signaling*—groups use rhetorical support or nominal affiliations as low-cost signals to enhance credibility without committing to deeper coordination[32]. Because rhetorical alignment does not require binding obligations, it can be easily adopted or abandoned based on shifting strategic priorities. Groups seeking to signal ideological commitment, deter rivals, or strengthen ties with potential allies can, thus, rely on rhetorical declarations that convey alignment while preserving operational flexibil-

[28](Morrow 2000; Horowitz 2010*a*,*b*; Christia 2012; Johnson 2017)
[29](Kroll 1993, p. 322)
[30](Keohane and Nye 1977)
[31](Morrow 1991)
[32](Fearon 1997; Kydd 2005)

ity. However, the costliness of signals varies, and in cases where signaling carries reputational risks—such as formal pledges of allegiance—groups may face greater constraints in reneging on commitments.

By contrast, cooperation that involves repeated material exchanges, such as the provision of arms or financial support, creates greater interdependence between partners. These arrangements likely conform better to the logic of *contracting*—actors structure agreements to manage transaction costs and mitigate risks of opportunism[33]. Since militant groups lack formal enforcement mechanisms, sustaining high-interdependence cooperation requires self-enforcing strategies that discourage defection and ensure compliance. Groups that rely on continued exchanges can employ reputational enforcement—where defection is deterred by the prospect of losing future support—or third-party mediation, in which an external actor helps regulate cooperative arrangements[34]. The stability of these relationships is contingent on the effectiveness of enforcement mechanisms; where oversight is weak or incentives for cooperation shift, alliances may collapse.

Interdependence thus structures both the benefits and risks of militant cooperation. When interdependence is low, groups retain autonomy but risk forming alliances that lack durability. When interdependence is high, cooperation is more stable but necessitates mechanisms to mitigate risks of defection and contractual breakdown. The choice between low- and high-interdependence cooperation reflects not only the immediate utility of the alliance but also the strategic considerations involved in balancing commitment and flexibility.

## *2 x 2 Typology*

The combination of power redistribution and interdependence produces four analytically distinct forms of militant cooperation. Each type follows a specific strategic logic that shapes the incentives for cooperation, the risks involved, and the durability of alliances.

Cooperation that neither redistributes power nor creates interdependence conforms to the logic of *Signaling*. In these cases, militant groups engage in rhetorical support or symbolic alignment, using public declarations or ideological endorsements to communicate solidarity without mate-

[33](Williamson 1981; Koremenos and Snidal 2001)
[34](Axelrod 1984; Walter 2002)

rially altering their own strategic position[35]. Signaling functions as a low-cost mechanism for groups to convey alignment, bolster credibility among constituents or external sponsors, and deter adversaries by demonstrating potential coordination[36]. Because these forms of cooperation impose minimal constraints, they can be initiated and dissolved with relative ease.

**Table 1.** A Typology of Cooperation among Militant Groups

| | *Power Redistributive Consequences* | |
|---|---|---|
| | Minor | Major |
| *Interdependency* | | |
| Low | Signaling<br>(Rhetorical support) | Commitment Problems<br>(Unilateral material support) |
| High | Contracting<br>(Arms, funds exchanges) | Principal-Agent<br>(Training, intelligence-sharing) |

In contrast, cooperation that does not shift the balance of power but generates interdependence follows the logic of *Contracting*. These arrangements involve reciprocal exchanges of resources, such as arms, funds, or logistical assistance[37], which necessitate mechanisms to enforce agreements and prevent opportunism. Since militant groups operate outside formal legal frameworks, enforcement relies on reputation, repeated interactions, or third-party mediation to ensure compliance. The interdependence created by these exchanges stabilizes cooperation, but when enforcement mechanisms fail, alliances may break down, disrupting resource flows and altering strategic calculations.

When cooperation significantly redistributes power without generating interdependence, it introduces risks associated with *commitment* problems. In these cases, a stronger actor provides unilateral material support—such as weapons, funding, or sanctuary—without mechanisms to ensure that the recipient remains aligned over time. The benefactor faces the classic commitment problem of empowering an ally today while lacking the ability to prevent future defection or betrayal.

Finally, cooperation that both redistributes power and creates interdependence follows the logic of *principal-agent* framework. These arrangements involve deep operational coordination, such as joint training programs, intelligence-sharing, or embedded military advisors, in which a stronger

[35](Farrell 2020; Berlin 2022)
[36](Balcells, Chen and Pischedda 2022)
[37](Thurston 2020)

actor provides expertise[38] while attempting to retain oversight over the recipient's actions. This structure creates vulnerabilities on both sides[39]: the benefactor must ensure that the recipient does not misuse its newly acquired capabilities, while the recipient must balance autonomy concerns with the benefits of sustained support. Because these forms of cooperation create moral hazard risks, benefactors often implement monitoring mechanisms or conditional assistance strategies to mitigate the possibility of misalignment.

The typology presented here captures the diverse forms of cooperation observed in multiparty conflict systems. In the Israeli-Palestinian conflict, the relationship between Hezbollah and Hamas largely conformed to the logic of *commitment* problems, as Hezbollah has provided Hamas with military training, intelligence, and weapons technology without establishing enforceable mechanisms to regulate Hamas's behavior[40]. By contrast, cooperation between Hamas and the PFLP and the DFLP aligns better with the logic of *signaling*. Although the PFLP and DFLP frequently met with Hamas to discuss Intifada strategies[41] and provided rhetorical support to Hamas' opposition of the Oslo peace process[42], there has not been a significant exchange of resources between PFLP/DFLP duo and Hamas.

In Southeast Asia, the long-term cooperation between the Moro Islamic Liberation Front (MILF) and the Free Aceh Movement (GAM) exemplifies the *principal-agent* framework. MILF operated training camps in the southern Philippines where its cadres offered six-months-long courses on weapons-training and explosives, which helped GAM substantially increase its capabilities at times when the group suffered militarily due to the counter-insurgency operations by the Indonesian army and terrorist-designation by the U.S. and many European countries[43]. In contrast, MILF's cooperation with Jemaah Islamiyah resembled *Contracting*, as it was limited to exchanges of cash, arms, and logistical assistance[44].

My typology extends beyond the conventional material and rhetorical categories by distinguishing material forms with major power redistributive consequences from those with minor redistributive consequences. My categorization also transcends the simple formal vs. incidental

[38](Horowitz 2010*a*)
[39](Kroll 1993)
[40](Zanotti 2010)
[41](Australian 2003)
[42](Cockburn 1998)
[43](Dillon 2013)
[44](Agence France Presse 2002)

cooperation dichotomy. Each of these forms of cooperation can be formally institutionalized or pursued incidentally without long-term commitments. For example, in India, the United Liberation Front of Assam (ULFA) and the National Socialist Council of Nagaland-Khaplang (NSCN-K) forged cooperative ties that align with the logic of *principal-agent* theory, wherein the cadres of both groups jointly trained in co-owned training camps in Myanmar as early as 1988[45]. ULFA and NSCN-K formally institutionalized their alliance multiple times under a variety of umbrella groups and united fronts: the Indo-Burma Revolutionary Front in 1990[46], United Liberation Front of Seven Sisters in 1995[47], and United Liberation Front of Western South East Asia in 2015[48]. In contrast, ULFA provided Adivasi People's Army (APA) with extensive training in weaponry and explosives in 2011, but the alliance remained short-lived and was not institutionalized[49].

The presented typology considers different categories of cooperation as distinct classifications, rather than points on a continuum. Each form of cooperation represents an interaction with its own unique characteristics and implications for the groups involved. In other words, the classification is not hierarchical or necessarily sequential but is used to capture the varied nature of alliances observed in real-world conflict environments. That being said, the different forms of cooperation, although conceptually distinct, can coexist simultaneously. Some militant group alliances may involve more than one type of cooperation. For example, a group might engage in *contracting* by exchanging weapons and funds, while also participating in a *principal-agent* relationship through joint training and intelligence-sharing. Moreover, alliances are dynamic and can change over time. An alliance that begins as a form of *signalling* may evolve into a *principal-agent* relationship as the groups deepen their collaboration.

## Alliance-Building in Multiparty Conflicts

I theorize that alliance-building among militant groups in multiparty conflict systems is shaped by two primary concerns: power redistribution and interdependence. These concerns structure the incentives, risks, and strategic calculations that define inter-group cooperation. I argue that co-

[45](Sonwalkar 1989)
[46](Ajay 1991)
[47](Karmakar 2017)
[48](Kalita 2015)
[49](India Blooms News Service 2011)

operation involving significant power redistribution—which gives rise to commitment problems and principal-agent dynamics—is primarily influenced by concerns over credible commitment and delegation risks, as actors seek to balance the benefits of strengthening an ally against the potential costs of losing influence or control. In contrast, cooperation that does not meaningfully alter the balance of power is often motivated by ideational alignment, with groups using rhetorical coordination as a low-cost signaling mechanism to reinforce credibility and legitimacy. Meanwhile, cooperation that induces high interdependence is shaped by contractual enforcement dynamics and the logic of asymmetric complementarity, as actors must weigh the benefits of reciprocal exchanges against the constraints imposed by interdependence.

### *Balance of Power Concerns as a Driver of Alliance-Building*

The Capability Aggregation Model of alliance formation proposes that actors form alliances to pool military capabilities beyond what they would possess in the absence of cooperation, often to deter or balance external threats[50]. Informed by this model, Christia (2012, p. 240) conceptualizes cooperation between militant organizations as "alliances with enough aggregate power to win the conflict, but with as few partners as possible so that the group can maximize its share of postwar political control." Following this logic, the capability aggregation model predicts that militant groups will form symmetrical alliances, where actors of similar strength collaborate to maximize their collective military power[51]. However, this model is overly simplistic, as alliance formation is not driven solely by the desire to aggregate capabilities[52]. Militant groups may also pursue alliances for non-military goals, such as increasing political influence, expanding their access to financial and logistical networks, or strengthening their legitimacy among key constituencies.

The Security-Autonomy Trade-off Model challenges the assumption that military capability aggregation is the sole motivation behind alliances. This framework suggests that while actors may seek to augment their capabilities through cooperation, they also aim to preserve and maximize their decision-making autonomy[53]. Since symmetrical alliances (e.g., those between actors of similar capabilities) may constrain autonomy by requiring greater coordination and compro-

[50](Morrow 2000; Johnson 2017)
[51](Gade et al. 2019)
[52](Campbell 2019)
[53](Morrow 1991)

mise, more powerful militant organizations often prefer asymmetrical alliances with less capable groups[54]. In such relationships, the weaker group gains security benefits, whereas the stronger group maintains control over the terms of cooperation while still enjoying the advantages of capability aggregation[55].

### *Commitment Problems and Principal-Agent Dynamics*

When alliances involve significant power redistribution, they introduce two challenges: commitment problems and principal-agent dynamics. The commitment problem arises when a stronger actor provides material support—such as military aid, training, or weapons—to a weaker group but lacks the ability to ensure future alignment, which leaves open the possibility that the beneficiary will attempt to maximize individual benefits against the collective gains of the alliance[56]. This risk is particularly acute in alliances where cooperation fundamentally alters the balance of power, as the collapse of such arrangements can leave the previously dominant actor at a strategic disadvantage[57]. If a power-redistributive alliance between two major actors collapses[58], one party may lose its relative advantage while its former ally emerges as the most powerful force in the conflict system. These concerns over relative gains and the long-term consequences of power shifts can discourage cooperation between evenly matched actors, pushing powerful groups to seek weaker partners who are less capable of posing future threats.

Beyond commitment problems, alliances that involve training, intelligence-sharing, or operational coordination introduce principal-agent risks, as the benefactor must delegate tasks to an ally while ensuring that these capabilities are not misused[59]. Moral hazard becomes a central concern in such relationships: the recipient retains decision-making autonomy and may apply the newly acquired skills or resources in ways that diverge from the benefactor's strategic objectives. The stronger actor, therefore, faces the dilemma of whether the benefits of empowering an ally outweigh the risks associated with losing control over how that ally ultimately conducts operations.

For these reasons, concerns over the dyadic balance of power play a central role in shaping

[54](Gade et al. 2019)
[55](Morrow 1991)
[56](Bapat and Bond 2012; Zeigler 2016)
[57](Mattes 2012)
[58](Morrow 1991)
[59](**?**Salehyan, Gleditsch and Cunningham 2011)

alliances that involve significant power redistribution, particularly those that entail joint training and intelligence-sharing. Given the risks associated with strengthening a potential competitor, powerful groups have incentives to avoid partnerships that might create future rivals. Instead, when engaging in deep operational cooperation, they should be more likely to seek asymmetric relationships in which a dominant actor provides training or intelligence-sharing to a weaker ally. These partnerships allow the stronger group to extend its influence while minimizing the risks of future defection or competition. Cooperation with weaker groups is also preferable because the costs of defecting from a deeply interdependent alliance tend to be higher for minor powers, as they are more reliant on external training, operational expertise, and intelligence access[60]. Although weaker groups may not always have a vested interest in maintaining the existing balance of power—and may even seek to challenge it[61]—aligning with a more powerful provider of training and intelligence-sharing offers substantial advantages, including protection against rivals[62] and political legitimacy[63].

> Hypothesis 1: Cooperation involving joint training and intelligence-sharing is more likely between asymmetric dyads.

## *Ideational Alignment*

Concerns over power redistribution shape alliance formation when cooperation has major redistributive consequences, as powerful groups seek to manage commitment and principal-agent problems. However, when cooperation does not fundamentally alter the balance of power, balance of power concerns likely become less central. In these cases, ideational alignment—shared ideological and political objectives—can play a decisive role in shaping cooperative relationships. Groups with compatible ideologies should be more likely to engage in rhetorical coordination, using public declarations of support, ideological endorsements, or symbolic affiliations to demonstrate alignment.

Ideational alignment between two actors may facilitate the formation of cooperative ties in a number of ways. First, groups, whose ideational preferences align, likely have shared visions and

[60](Mattes 2012)
[61](McLauchlin and Pearlman 2012)
[62](Morrow 1991)
[63](Krause and Singer 2001)

joint interests[64]. Compatibility of visions, interests, and political preferences enable prospective allies to agree on a set of principles underlying their cooperative arrangements and satisfying their key political aspirations without incurring major negotiation costs[65].

Ideational alignment facilitates rhetorical cooperation in several ways. First, groups that share ideological commitments often have overlapping strategic objectives, which reduce negotiation costs and simplify cooperation[66]. Public declarations of support allow ideologically compatible groups to reaffirm their commitment to common goals without requiring direct material exchanges. Second, signaling ideological alignment can reinforce a collective identity among aligned actors, fostering cohesion and increasing reputational capital[67]. Shared ideological commitments can help groups project unity and discipline, deterring defection and strengthening their standing within broader militant networks[68]. Finally, rhetorical support functions as a reputational mechanism, allowing groups to credibly signal their commitment to shared political aspirations[69]. Many militant organizations rely on a common support base, appeal to the same constituency, or claim to represent a broader ideological movement. Failing to honor rhetorical commitments—such as withdrawing public support for an ally—may damage a group's credibility, reducing its ability to attract recruits and maintain its legitimacy within the broader ideological community[70].

> Hypothesis 2: Cooperation involving rhetorical support is more likely among dyads with compatible ideologies.

### *Interdependency and Asymmetric Complementarity*

Asymmetric complementarity refers to a situation where two actors possess different but complementary capabilities, resources, or strengths. The literature on inter-firm collaboration highlights that alliances often emerge when partners bring distinct but mutually beneficial assets to the relationship, such as technological expertise, logistical infrastructure, or market access[71]. Similar

[64](Gade et al. 2019)
[65](Balcells, Chen and Pischedda 2022)
[66](Gade et al. 2019; Balcells, Chen and Pischedda 2022)
[67](Bacon 2018)
[68](Gutiérrez Sanín and Wood 2014; Oppenheim et al. 2015; Hoover Green 2016; Blair et al. 2022)
[69](Gade et al. 2019)
[70](Blair et al. 2022)
[71](Hagedoorn 1993; Das and Teng 2000; Soda and Furlotti 2017)

dynamics shape security alliances, where states with different but complementary military capabilities cooperate to enhance their collective effectiveness[72].

In the context of militant group cooperation, asymmetric complementarity provides a powerful incentive for high interdependence alliances. Groups that lack financial resources but have local intelligence, operational networks, or specialized knowledge may align with groups that have funding, weapons, or tactical expertise[73]. These relationships allow each actor to leverage their unique strengths while mitigating their own weaknesses[74].

### *Contracting and Oversight in Principal-Agent Relationships*

When actors enter deeply interdependent relationships—whether through contracting (e.g., the exchange of arms and funds) or principal-agent dynamics (e.g., training and intelligence-sharing)—they must establish mechanisms to ensure reciprocity and compliance to mitigate the risks inherent in such alliances. Asymmetric complementarity can serve as a risk mitigation strategy[75], allowing allies to diversify their resources, skills, or tactics and thereby achieving "a better combination of risk and return than they would be able to achieve by themselves"[76]. Thus, I hypothesize that:

> Hypothesis 3: High-interdependence cooperation (e.g., the exchange of arms, funds, training, and intelligence) is more likely among dyads with complementary resources, skills, and expertise.

## Research Design

To test my hypotheses, I use Temporal Exponential Random Graph Models (TERGMs) on a new, expansive, disaggregated, time-series network dataset of cooperative relations between 53 ethnonationalist Northeast Indian militant groups from 1981 through 2021. I collected new data since existing publicly available databases[77] on inter-group militant relations tend to overlook smaller,

[72](Murdoch and Sandler 1984)
[73](Moghadam and Wyss 2020; Blair and Potter 2023)
[74](Bacon 2018)
[75](Kinne and Kang 2023)
[76](Conybeare 1994)
[77]For instance, Asal and Rethemeyer (2008) and Asal, Ackerman and Rethemeyer (2012) utilize information from the Terrorism Knowledge Base (TKB), which reveals that 72.1 percent of terrorism incidents are carried out by unidentified organizations. This suggests that a significant portion of active and operational militant groups that tend

weaker, less lethal groups[78], over-aggregate the form of support that groups may offer their allies[79], and lack information on directionality of the support.

Northeast India presents an interesting case due to its ethnic diversity, hilly terrain, dense forests, cross-border dynamics, and a long history of insurgencies dating back to the pre-independence era[80]. The region is home to several ethnically-motivated insurgencies, dozens of militant groups fighting for self-determination rights, and a great deal of cross-border activity into the neighboring Bangladesh, Bhutan, Myanmar, Nepal, and China, shaping inter-group militant relations.

## *Data Collection*

The data collection for this project encompasses all armed non-state organizations, including groups referred to as rebels, insurgents, and terrorists. This comprehensive approach provides broader insights into inter-group relations among armed non-state actors compared to studies that focus solely on rebel groups[81] or terrorist groups[82].

To address the potential bias resulting from incomplete lists of actors, my data compilation includes information on 53 groups, at least half of which have not been previously included in network data collection efforts. These groups have been engaged in conflicts for independence, autonomy, or greater self-determination rights in the seven Northeastern states of India. To identify the list of actors, the data collection process began with a set of 26 Northeast Indian groups identified in the UCDP/PRIO Armed Conflict Dataset (ACD) version 21.1. Coders collected information on basic characteristics of these UCDP/PRIO groups using secondary sources. As they gathered information, they noted down other groups mentioned in the sources. These lists were then cross-

to not claim attacks are excluded from existing datasets.

[78]This presents a theoretical concern as smaller groups, by cooperating or fighting larger groups, may influence the behavior of larger groups without generating high casualty rates. Moreover, relying heavily on large and lethal groups creates methodological challenges. Incomplete networks with missing nodes can lead researchers to overestimate or underestimate the prevalence of connections and disrupt measures of centrality (Krebs (2002; Gill and Freeman 2013).

[79]An exception to this is the Militant Group Alliances and Rivalries (MGAR) Database (Blair et al. 2022), which distinguishes between financial support, material support, training support, and operational support. My database, as described in the Data Collection section, disaggregates cooperation into 8 distinct forms while specifying the exact type of material, training, and operational support. Furthermore, my database is directional in that I identify the sender and the receiver of each case of cooperation I uncover.

[80](Maaker and Joshi 2007)

[81](Bapat and Bond 2012; Christia 2012)

[82](Asal and Rethemeyer 2008)

referenced and compared to identify non-UCDP/PRIO groups that (a) operated in Northeast India between 1981 and 2021, (b) had publicly announced their group name, and (c) employed armed force in pursuit of a political objective[83].

My dataset documents the temporal variation in militant networks between 1981-2021, enabling us to account for actor entry-exit, changing nature of ties, and estimate the impact of time-variant factors on cooperative arrangements between groups[84]. The dataset distinguishes between 8 distinct forms of cooperation: joint operations, training support, provision of arms and funds, intelligence-sharing and logistical support, joint planning and meetings between leaders, joint public statements, umbrella groups, and rhetorical support.

My theoretical framework engages with the directionality of support that groups provide for each other. Signaling-based cooperation involves Group A providing rhetorical support to Group B as a low-cost signal of alignment. Contractions may involve Group A delivering weapons to Group B in exchange for money. Principal-Agent type of cooperation usually entails Group A assisting Group B with training or Group B sharing intelligence with Group A. In all of these relations, cooperation is directional between a sender and a receiver. This necessitates testing my hypotheses on data that distinguish between senders and receivers of support rather than simply outlining cooperation between pairs of groups. To the best of my knowledge, publicly available datasets lack directionality. For each case of cooperation included in my networks (e.g., training/intelligence-sharing, arms/funds exchanges, rhetorical support), which I describe below, I also identified the sender and the receiver of the support. Given that my data includes 53 groups over 40 years, the dyadic directional version of my dataset consists of 24,944 group-group dyad-years.

## *Empirical Strategy*

I create and analyze three temporal networks: networks of high interdependence cooperation involving training and intelligence-sharing (Principal-Agent), networks of arms and funds exchanges (Contracting), and networks of rhetorical support (Signaling). These networks are constructed for

[83] 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" (Pettersson 2022) but also include in my data groups that meet the above definition that did not cause 25 battle-related deaths.

[84] (Wood and Kathman 2015; Dorff, Gallop and Minhas 2020)

every year between 1981 and 2021.

Support in the form of training, intelligence, or logistics tends to have major power redistributive consequences and create high interdependence between allying parties. In these networks, pairs of groups are assigned a tie in any given year if one group provided logistical support, training, or intelligence-sharing to another. If Group A provided training for Group B while Group B shared intelligence with Group A in exchange, the dyad is coded as having two separate ties with different directionality. 40 out of 53 groups (75 percent) in my sample engaged in this form of cooperation at least once.

Support in the form of arms and funds exchanges may potentially create high interdependence between allying parties but is unlikely to have major power redistributive consequences. In these networks, pairs of groups are assigned a tie at any given year if one group provided the other with arms, arsenal, explosives, or financial support. If Group A provided arms to Group B while Group B paid Group A in exchange, the dyad is coded as having two ties with different directionality. 29 out of 53 groups (55 percent) in my sample engaged in this form of cooperation at least once.

Rhetorical support in the form of verbal endorsements, declarations of loyalty, or pledges of allegiance is unlikely to have major power redistributive consequences or create interdependence between groups. In these networks, pairs of groups are assigned a tie in any given year if one group publicly praised, declared loyalty to, or pledged allegiance to another group. If Group A provided rhetorical support to Group B and Group B publicly reciprocated, the dyad is coded as having two ties with different directionality. 30 out of 53 groups (57 percent) engaged in this form of cooperation at least once.

Figures 2 to 4 show a time-invariant version of my networks. For comparison purposes, I aggregated my network ties over time to construct a single network for each cooperation type[85]. The network illustrations confirm that different forms of cooperation produce different network structures. The network of *Arms/Funds* has two central actors, namely ULFA and NSCN-IM, that have many ties to other groups, whereas other groups tend not to form ties among themselves. ULFA and NSCN-IM, along with NSCN-K and NDFB-RD, emerge as central actors in the network of *Training/Intelligence* as well. However, the *Training/Intelligence* network is much denser and exhibit many ties among peripheral actors. The network of *Rhetorical Support* has a drasti-

[85]My TERGMs, presented in the next section, are run on my temporal networks with 41 time points.

cally different structure: the central actors are ULFA, KLO, and UPPK and a separately quintet comprised of GNLA, UALA, LAEF, AMEF, and ANVC-B emerges without any ties to the core of the network.

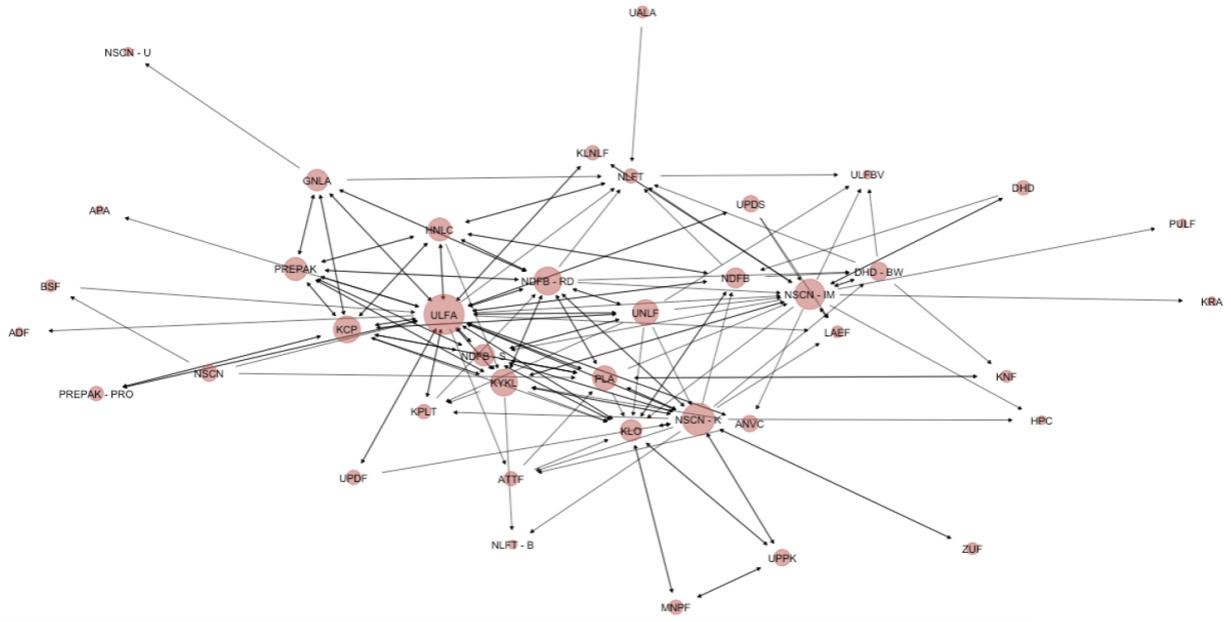


**Figure 1.** Training/Intelligence Network

Since conventional statistical analysis methods assume independent dyad-year observations and this assumption is problematic in alliance networks[86]. I use Temporal Exponential Random Graph Models (TERGMs) to analyze my networks. TERGMs accommodate inter-temporal dependence in longitudinally observed networks by extending ERGMs[87]. One advantage of ERGM extensions over other network modeling approaches, such as the Stochastic Actor-Oriented Models, is that ERGMs enable us to model network dependencies instead of just controlling for them, while estimating the effects of exogenous covariates simultenously.

## *Key Independent Variables*

I have three key independent variables: power disparity, shared constituency, and attack portfolio dissimilarity.

[86](Cranmer, Desmarais and Kirkland 2012)
[87](Leifeld, Cranmer and Desmarais 2018)

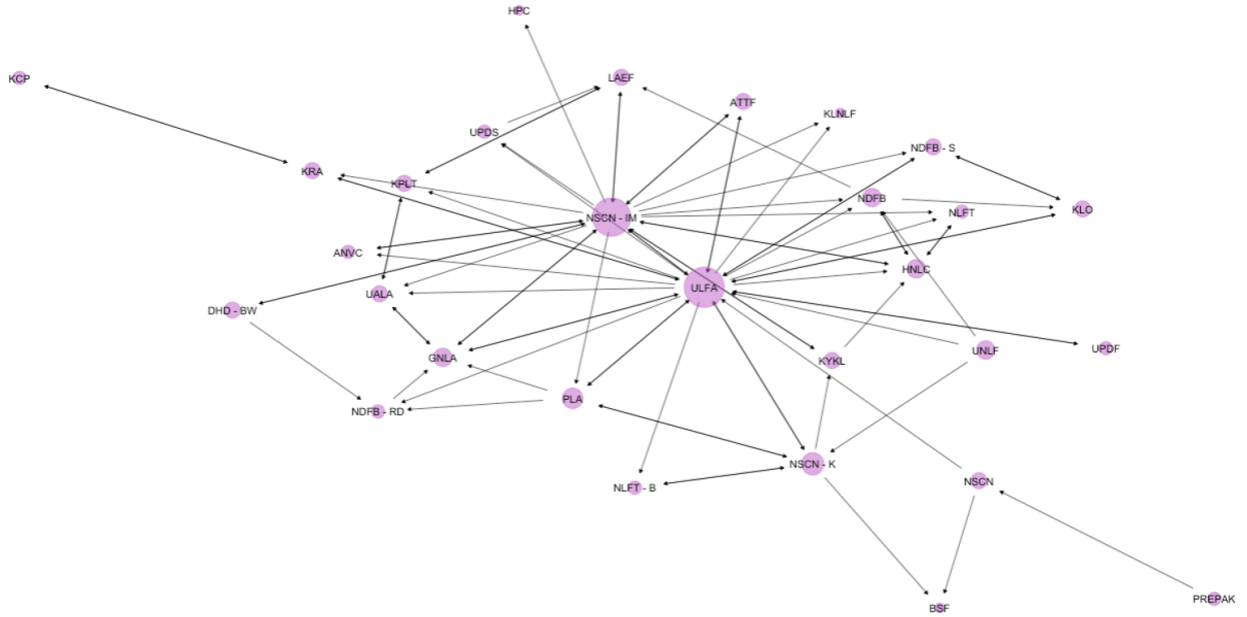


**Figure 2.** Arms/Funds Network

Power disparity tests the hypothesized relationship between asymmetrical dyads and cooperation that induces principal-agent dynamics—such as those involving training and intelligence-sharing (Hypothesis 1). I proxy groups' military capacity with the logistical complexity of their attacks, as more capable groups can carry out logistically complex attacks more easily. Following George (2018), I consider assassinations, bombings, hijackings, and hostage-takings to be logistically complex attacks. Relying on the Global Terrorism Database (GTD)'s `attacktype` variable, I compute the weighted percentage of logistically complex attacks committed by a given group in a given year. This provides a time-variant measure of each group's military capacity, expressed as a continuous value between 0 and 1. *Power disparity* denotes the absolute difference between the military capacities of two groups in a dyad. Higher values indicate greater asymmetry.

Shared constituency tests the hypothesized relationship between ideational alignment and rhetorical support (Hypothesis 2). I define constituency as "the broad social group on whose behalf [militants] claim to fight, with the objective of addressing the predicament it faces"[88]. I proxy ideational alignment by determining whether two groups appeal to the same broad ethnic group, since the groups in my sample all have ethnonational separatist agendas, and existing research identifies the nature of appeals as a key dimension of a militant group's ideational landscape[89].

[88](Balcells, Chen and Pischedda 2022)
[89](Gade et al. 2019)

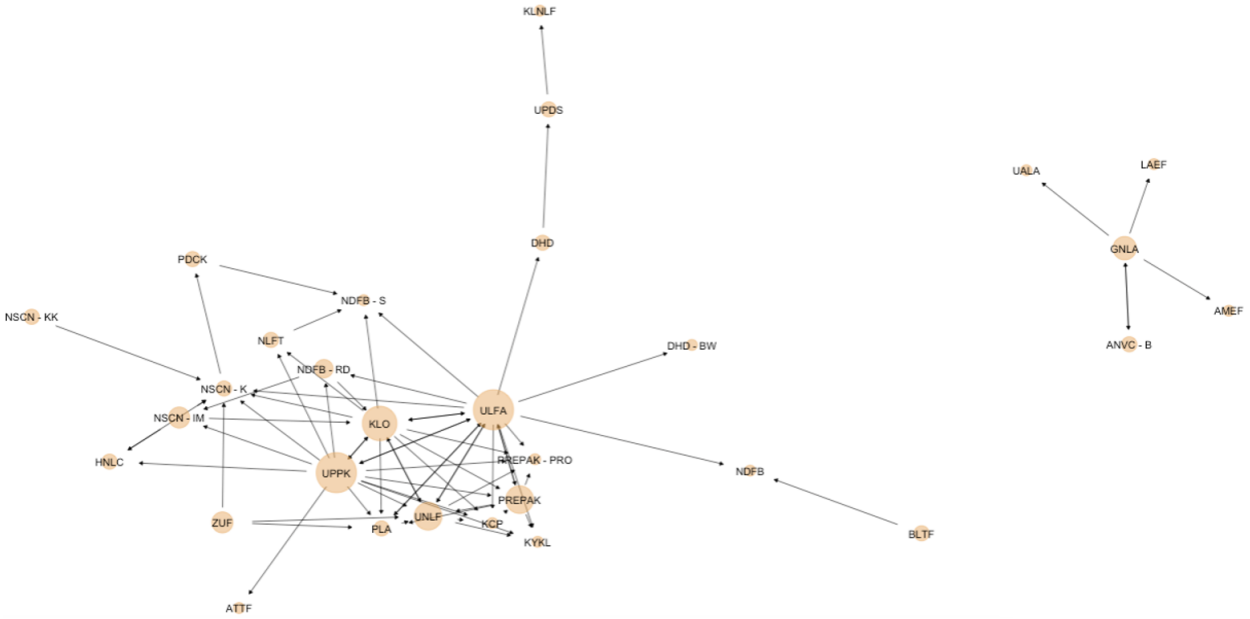


**Figure 3.** Rhetorical Support Network

Using secondary sources, I identified the ethnic and/or tribal group on whose behalf each militant organization in my dataset claims to fight. *Shared constituency* is a binary variable coded 1 if two groups claim to fight on behalf of the same ethnic/tribal group, and 0 otherwise.

Attack portfolio dissimilarity tests the hypothesized relationship between complementarity and high interdependence cooperation (Hypothesis 3). Following a similar logic to how I compute attack complexity, I measure groups' attack portfolios using the GTD's `attacktype` variables. For a given group in a given year, I first calculate the proportion of each specific attack type[90]. I then treat these percentages as components in a maximum-likelihood factor analysis to compute a portfolio score for a given group in a given year. Finally, I compare the portfolio scores of each dyad[91]. *Attack portfolio dissimilarity* denotes the absolute difference in portfolio scores between two groups in a dyad. Higher values indicate greater dissimilarity.

Finally, I include two network dependency terms in my TERGMs: *mutual* and *gwesp*. *Mutual* accounts for reciprocity in directed networks, capturing whether groups that receive support are more likely to provide support in return. Reciprocity is particularly relevant to high interdepen-

[90]The distinct attack types, as identified by the GTD, are armed assault, assassination, bombing/explosion, facility/infrastructure attack, hijacking, hostage-taking (barricade), hostage-taking (kidnapping), and unarmed assault.

[91]Conceptually, this equals comparing how much Group A relies on a particular attack type with how much Group B relies on the same attack type.

dence cooperation, as groups engaged in training, intelligence-sharing, or resource exchanges may seek reassurances of commitment from their partners. *Gwesp* models network transitivity, capturing whether groups that share common partners are more likely to form direct ties. Transitivity is particularly relevant to alliances involving training, intelligence-sharing, or financial/resource exchanges, where groups may prefer to cooperate with allies of their allies to strengthen operational security and minimize coordination risks.

### *Control Variables*

At the group level, I control for the individual military capacity of each group. Weaker groups may not be perceived as credible alliance partners because they may be tempted to exploit their stronger allies[92].

At the network level, I control for popularity effects. Popularity effects describe the tendency of actors in a network to form connections with actors who already have numerous connections[93]. Cooperation networks are often characterized by core-periphery patterns, where alliances tend to cluster around a small number of core groups[94]. This clustering may occur because a group's reputation as a committed alliance partner enhances its desirability.

To account for popularity effects, I include out-stars (i.e., accounting for the popularity of the sender) in my networks of high interdependence cooperation involving training and intelligence-sharing (Principal-Agent) and arms/funds exchanges (Contracting). I also include in-stars (i.e., accounting for the popularity of the receiver) in my network of rhetorical support (Signaling)[95].

In my robustness checks (presented in Appendix 2), I also control for additional group- and dyad-level factors, including joint state sponsorship.

[92](Olson 1965)
[93](Cranmer, Desmarais and Kirkland 2012)
[94](Asal et al. 2016; Bacon 2017, 2018)
[95]This modeling choice is due to the patterns exhibited in Figures 2 to 4. Networks involving training, intelligence-sharing, and arms/funds exchanges feature several groups that send support to many partners, whereas the rhetorical support network includes groups that receive widespread public endorsements.

# Results

To test my hypotheses, I run a series of Temporal Exponential Random Graph Models (TERGMs) on my networks of different forms of cooperation. Table 3 presents my main TERGMs. Models 1, 2, and 3 test my hypotheses regarding high interdependence cooperation involving training and intelligence-sharing (Principal-Agent), arms and funds exchanges (Contracting), and rhetorical support (Signaling), respectively. Model 4 runs the same model specification on networks of cooperation of any type to demonstrate the merits of disaggregating different forms of cooperation.

In Models 1, 2, and 3, the coefficients on my key independent variables (e.g., power disparity, ideational alignment, and attack portfolio dissimilarity) are signed in the expected directions and significant, yielding support for my hypotheses.

To begin with, my theoretical framework suggested that cooperation involving significant power redistribution, such as training and intelligence-sharing, is primarily driven by balance of power concerns. In Model 1, power disparity is positively associated with the likelihood of high interdependence cooperation involving training and intelligence-sharing, consistent with the expectation that stronger actors prefer asymmetric alliances to mitigate the risks of empowering a potential competitor. This yields support for Hypothesis 1, which postulates that high interdependence cooperation involving training and intelligence-sharing is more likely between asymmetric dyads.

**Table 2.** TERGMs of Militant Group Cooperation in Northeast India, 1981-2021

| | DV: Cooperation | | | |
|---|---|---|---|---|
| | Training/Intelligence Model 1 | Arms/Funds Model 2 | Rhetorical Model 3 | Any Cooperation Model 4 |
| Power disparity | 0.22 [ 0.06; 0.46]* | -0.19 [ -0.41; 0.11] | -0.13 [ -0.74; 0.54] | -0.02 [-0.13; 0.10] |
| Ideational alignment | -0.23 [-1.51; 0.15] | -1.45 [-15.60; -0.64]* | 2.04 [ 1.22; 3.11]* | 0.26 [-0.35; 0.61] |
| Attack portfolio dissimilarity | 0.19 [ 0.10; 0.26]* | 0.23 [ 0.11; 0.36]* | 0.14 [ -0.07; 0.32] | 0.18 [ 0.08; 0.26]* |
| Reciprocity | 4.28 [ 3.46; 4.79]* | 5.47 [ 4.55; 6.51]* | -16.27 [-19.26; -12.57]* | 3.87 [ 3.48; 4.20]* |
| Transitivity | 0.35 [ 0.29; 0.81]* | 0.61 [-13.29; 1.22]† | 1.39 [-15.48; 1.85] | 0.07 [ 0.00; 0.29]* |
| Capability (sender) | -0.08 [-0.40; 0.11] | 0.41 [ -0.02; 0.72]† | 0.05 [ -0.43; 0.77] | 0.07 [-0.11; 0.20] |
| Capability (receiver) | -0.25 [-0.49; -0.07]* | -0.31 [ -0.70; -0.04]* | 0.28 [ -0.54; 0.78] | -0.11 [-0.24; 0.01]† |
| Node popularity (sender) | 0.28 [ 0.19; 0.39]* | 0.47 [ 0.14; 0.68]* | | 0.30 [ 0.24; 0.39]* |
| Node popularity (receiver) | | | 0.54 [ 0.45; 0.86]* | 0.33 [ 0.30; 0.38]* |
| Edges | -5.38 [-5.68; -5.05]* | -6.13 [ -6.67; -5.66]* | -7.25 [ -8.42; -6.68]* | -5.49 [-5.80; -5.18]* |
| Network-years | 1981-2021 | 1981-2021 | 1981-2021 | 1981-2021 |
| Directed dyad-years | 24944 | 24944 | 24944 | 24944 |

Note: Bootstrapped pseudolikelihood estimates, as described in Desmarais and Cranmer (2012), reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. The confidence intervals presented in brackets reflect the traditional 0.05 confidence level. Asterisks (*) indicate that the coefficient is statistically significant at or beyond the traditional 0.05 level. Daggers (†) indicate the coefficient is statistically significant at 0.1 level.

In Model 3, ideational alignment is associated with an increase in the likelihood of rhetorical support (Signaling), consistent with the expectation that shared political aspirations facilitate cooperation in the absence of interdependence (H2).

My theory also posited that asymmetrical complementarity are important determinants of cooperation types that induce high interdependence (e.g., training and intelligence-sharing, as well as arms and funds exchanges). In Models 1 and 2, attack portfolio dissimilarity is associated with an increase in the likelihood of training and intelligence-sharing (Model 1) and arms and funds exchanges (Model 2). These results support Hypothesis 3, which predicts that high interdependence cooperation is more likely to be formed between groups with complementary skillsets and expertise. When groups enter into cooperative arrangements that impose interdependence, they select partners with distinct but complementary resources, skills, and expertise.

Moving to my network dependency terms, I find that network structures significantly influence the formation of cooperation between militant groups. In Models 1 and 2, my reciprocity term is positive and significant, suggesting that high interdependence cooperation involving training, intelligence-sharing (Principal-Agent), and arms/funds exchanges (Contracting) is often bidirectional. This finding aligns with the expectation that groups engaged in materially significant cooperation are more likely to establish reciprocal relationships to ensure continued resource access and operational reliability. In Model 3, my reciprocity term is negative and significant, indicating that rhetorical support (Signaling) is unlikely to be reciprocated. This result supports the idea that rhetorical commitments do not create material obligations between groups; those offering ideological endorsements or pledges of allegiance do not necessarily expect a return commitment.

Additionally, in Model 1, my transitivity measure is positive and significant, suggesting that high interdependence cooperation involving training and intelligence-sharing (Principal-Agent Theory) is more likely to occur within structured alliance clusters. This result aligns with the expectation that more powerful actors (e.g., Principals) engage in multiple asymmetric partnerships with weaker actors (e.g., Agents) to mitigate the risk of operational failure should one of their partners defect or free-ride in the future.

Finally, I run my TERGM specifications after collapsing different forms of cooperation into a single measure, coded 1 if pairs of groups engaged in any form of cooperation in a given year. Model 4 presents the results of this specification. Neither power disparity nor ideational align-

ment is a significant predictor in Model 4, suggesting that when different forms of cooperation are not adequately distinguished, key factors influencing militant cooperation may appear insignificant. This underscores the importance of categorizing and separately evaluating different forms of cooperation, allowing for more precise hypothesis testing and stronger theoretical inferences.

### *Goodness-of-Fit*

I evaluate the goodness-of-fit (GOF) of my TERGM (Temporal Exponential Random Graph Model) by generating 100 simulated networks at each time step. I calculate statistics for shared partners between edges, geodesic distances, and node degrees. Each statistical measure compares the simulated networks to the observed ones and combines the results into a single value. The graphs in Appendix 1 depict goodness-of-fit assessment. GOF assessment demonstrates that the models accurately capture the observed network behavior.

### *Robustness Checks*

I run additional network analysis models to ensure the robustness of my findings. First, my data show that groups' decisions to enter into different forms of cooperation are not mutually exclusive. That is, some dyads simultaneously engage in multiple types of cooperation within the same time period. For instance, out of 363 dyad-years that entered into a *Principal-Agent* relationship, 47 dyad-years (13 percent) also observed a form of *Contracting*. To ensure that this non-mutually exclusive nature of cooperation does not confound my inferences, I run TERGM specifications controlling for whether dyads engaged in other forms of cooperation during the same period. For instance, when analyzing my network of training and intelligence-sharing, I control for whether pairs of groups also engaged in arms and funds exchanges or rhetorical support during the same period. As presented in Appendix 3, controlling for other simultaneous forms of cooperation does not change my findings.

Second, I run additional TERGM specifications by controlling for a variety of group- and dyad-level factors that could confound the relationship between cooperation and my key independent variables. At the group level, I control for foreign state support and splintering history. Groups with foreign state support may be sought out as allies by groups lacking such support; however,

they may not need to form inter-group alliances if they can bolster their capabilities through state sponsorship[96]. Groups that emerged through splintering from a parent organization may struggle to credibly commit to inter-group alliances, as they may be less capable of resolving internal disagreements through bargaining and compromise.

At the dyad level, I control for joint ideology, including Marxist/revolutionary ideology and religious-oriented ideology, as well as joint foreign state supporters. In my original TERGMs, I measured ideational alignment based on whether pairs of groups shared an ethnic constituency, since my population of groups consists of ethno-nationalist separatists. However, Marxist or religious ideologies could confound the relationship between shared constituencies and cooperation. Pairs of groups that appeal to the same ethnic constituency might still perceive each other as ideological rivals if one adheres to a more extremist ideology[97]. Additionally, joint foreign state sponsors can facilitate cooperation by acting as institutionalized guarantees for inter-group alliances[98], making it easier for groups to commit to cooperation types that induce high interdependence. As presented in Appendix 2, my findings remain robust when controlling for these additional group- and dyad-level confounders.

# Conclusion

Scholars focusing on alliances between rebel or terrorist groups have long debated with whom groups cooperate[99]. Recent scholarship has expanded this focus by exploring the different ways in which such cooperation occurs[100]. However, existing studies remain constrained by conventional distinctions between material and rhetorical cooperation or between formal and informal alliances. These broad categories fail to account for the strategic variation in the depth, costs, and risks associated with different forms of cooperation. To address this gap, I introduce a more structured typology that classifies cooperation based on its power redistributive consequences and interdependence effects. This framework distinguishes among four analytically distinct forms of cooperation: Signaling, Contracting, Commitment Problems, and Principal-Agent Relationships.

[96](Siqueira and Sandler 2006)
[97](Gade et al. 2019; Hafez 2020)
[98](Popovic 2018; Bapat and Bond 2012)
[99](Bapat and Bond 2012; Asal et al. 2016; Bacon 2018; Popovic 2018)
[100](Steinwand and Metternich 2022; Blair et al. 2022; Balcells, Chen and Pischedda 2022; Bolte 2022)

Building on this typology, I develop a novel theoretical framework that explains why militant groups select specific forms of cooperation. I emphasize the role of balance of power concerns, ideational alignment, and asymmetric complementarity in shaping inter-group cooperation. By considering these factors in conjunction with each other, I demonstrate how different configurations of power disparities, ideological affinities, and resource complementarities shape distinct forms of alliances. I test and find support for my hypotheses using directed data on a wide range of cooperative arrangements between militant groups in Northeast India.

My findings provide new insights into both the composition and structure of militant alliances. Power-disparate dyads tend to form *principal-agent* relationships, characterized by extensive cooperation such as training, intelligence-sharing, and logistical support. Ideologically aligned groups engage in *signaling*, primarily involving rhetorical support and symbolic alignment without material exchanges. In contrast, arms and funds exchanges follow the logic of *contracting*, where cooperation is mutually beneficial but does not necessarily disrupt the distribution of power within the dyad. These findings underscore the need to disaggregate different forms of cooperation to gain a more precise understanding of inter-group relations in complex multiparty conflict environments.

This study also identifies several promising avenues for future research. First, further studies should assess the impact of different forms of cooperation on conflict dynamics, including escalation, civilian welfare, and peacebuilding efforts. Particular attention should be given to how different forms of cooperation facilitate the diffusion of ideas, strategies, and tactics among militant groups. A deeper examination of which cooperation types accelerate radicalization or operational learning could provide valuable insights into counterterrorism and conflict resolution strategies.

Second, future research should explore the evolution of cooperative arrangements over time. A key question is whether low-cost, low-commitment cooperation serves as a pathway to deeper forms of cooperation. Understanding how alliances transition from low- to high-commitment cooperation could enhance our ability to predict alliance formation and dissolution.

Finally, research should examine the role of external actors—including foreign state sponsors, state intervention, and non-violent domestic or international actors—in influencing the formation and evolution of militant alliances. Investigating how state support shapes militant cooperation could inform policy interventions and peacebuilding strategies, ultimately contributing to more effective conflict management and sustainable peace outcomes.

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# Appendix

## Contents

# Appendix 1 Goodness-of-Fit

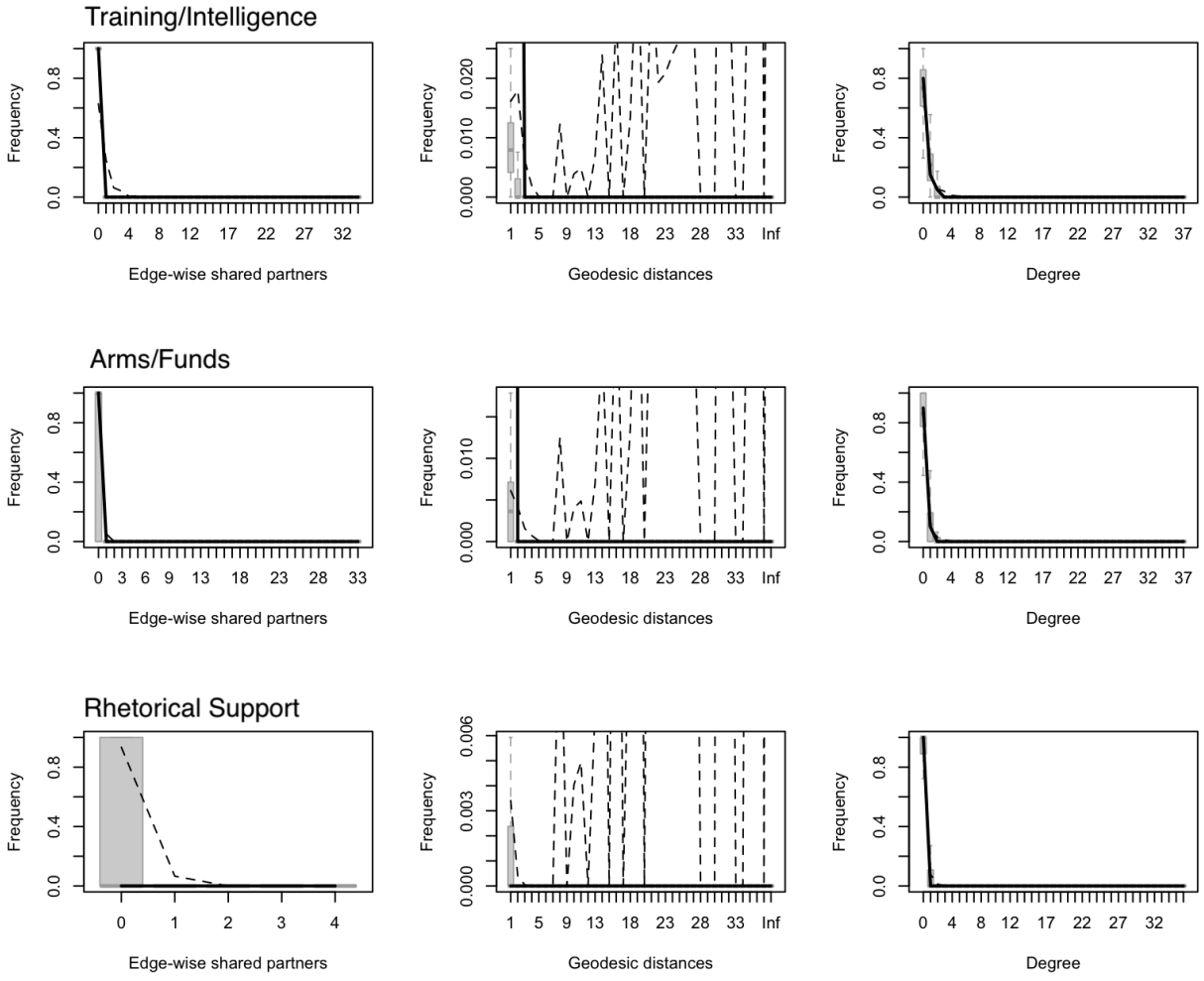


**Figure A.1.** Goodness-of-fit Statistics

# Appendix 2 Additional Controls

In addition to the controls included in the main models, I control for various other factors: Marxist/Revolutionary ideology, religious-oriented ideology, splinter history, foreign state support, and joint foreign state supporters.

**Table A.1.** TERGMs of Militant Group Cooperation in Northeast India, 1981-2021 (Additional Group- and Dyad-Level Controls)

| | **Training/Intelligence** | **Arms/Funds** | **Rhetorical Support** |
|---|---|---|---|
| Power disparity | 0.20 [ 0.04; 0.46]* | -0.30 [ -0.55; 0.01] | -0.19 [ -0.78; 0.34] |
| Ideational alignment | -0.25 [-1.42; 0.11] | -1.45 [-15.52; -0.62]* | 1.90 [ 0.91; 3.02]* |
| Attack portfolio dissimilarity | 0.17 [ 0.09; 0.23]* | 0.18 [ 0.06; 0.30]* | 0.13 [ -0.10; 0.32] |
| Reciprocity | 4.24 [ 3.41; 4.73]* | 5.46 [ 4.50; 6.56]* | -15.79 [-19.16; -12.73]* |
| Transitivity | 0.35 [ 0.28; 0.83]* | 0.57 [-13.35; 1.18] | 1.28 [-15.61; 1.83] |
| Capability (sender) | -0.12 [-0.43; 0.04] | 0.42 [ -0.01; 0.78] | 0.02 [ -0.42; 0.71] |
| Capability (receiver) | -0.30 [-0.55; -0.10]* | -0.31 [ -0.73; -0.03]* | 0.24 [ -0.64; 0.78] |
| Node popularity (sender) | 0.27 [ 0.17; 0.39]* | 0.38 [ -0.00; 0.60] | |
| Node popularity (receiver) | | | 0.51 [ 0.41; 0.83]* |
| Ideological Match | 0.07 [-0.12; 0.25] | -0.44 [ -0.78; -0.12]* | -0.07 [ -0.68; 0.46] |
| Splinter group | -0.16 [-0.53; 0.11] | -0.47 [ -1.23; 0.08] | -0.26 [ -0.82; 0.43] |
| Foreign support (Sender) | 0.15 [-0.00; 0.30] | 0.15 [ -0.18; 0.43] | 0.34 [ -0.03; 1.06] |
| Foreign support (receiver) | -5.30 [-5.67; -4.88]* | -5.74 [ -6.32; -5.23]* | -7.26 [ -8.84; -6.73]* |
| Joint foreign supporter | 0.10 [-0.28; 0.46] | 0.27 [ -0.58; 0.83] | 0.06 [ -0.37; 0.81] |
| Edges | -5.48 [-6.04; -4.95]* | -5.65 [ -6.93; -4.55]* | -6.89 [ -9.96; -5.88]* |
| Network-years | 1981-2021 | 1981-2021 | 1981-2021 |
| Directed dyad-years | 24944 | 24944 | 24944 |

Note: Bootstrapped pseudolikelihood estimates, as described in Desmarais and Cranmer (2012), reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. The confidence intervals presented in brackets reflect the traditional 0.05 confidence level. Asterisks (*) indicate that the coefficient is statistically significant at or beyond the traditional 0.05 level. Daggers (†) indicate the coefficient is statistically significant at 0.1 level.

# Appendix 3 Controlling for Other Forms of Cooperation

**Table A.2.** TERGMs of Militant Group Cooperation in Northeast India, 1981-2021 (Controlling for Other Forms of Cooperation)

| | **Training/Intelligence** | **Arms/Funds** | **Rhetorical Support** |
|---|---|---|---|
| Power disparity | 0.26 [ 0.10; 0.52]* | -0.37 [ -0.64; 0.04] | -0.18 [ -0.80; 0.51] |
| Ideational alignment | -0.09 [ -1.43; 0.32] | -1.51 [-15.81; -0.65]* | 2.16 [ 1.35; 3.24]* |
| Attack portfolio dissimilarity | 0.17 [ 0.07; 0.24]* | 0.24 [ 0.08; 0.39]* | 0.12 [ -0.11; 0.31] |
| Reciprocity | 4.10 [ 3.17; 4.66]* | 5.09 [ 3.84; 6.42]* | -16.00 [-19.09; -13.46]* |
| Transitivity | 0.35 [ 0.28; 0.89]* | 0.50 [-13.84; 1.36] | 1.36 [-15.64; 1.85] |
| Capability (sender) | -0.13 [ -0.49; 0.07] | 0.50 [ -0.01; 0.88] | 0.04 [ -0.39; 0.76] |
| Capability (receiver) | -0.26 [ -0.52; -0.09]* | -0.31 [ -0.80; 0.03] | 0.31 [ -0.48; 0.85] |
| Node popularity (sender) | 0.29 [ 0.19; 0.40]* | 0.41 [ 0.01; 0.68]* | |
| Node popularity (receiver) | | | 0.54 [ 0.46; 0.88]* |
| Synergistic Alliance | | 2.80 [ 2.07; 3.93]* | 1.36 [-15.24; 2.67] |
| Transactional Interaction | 2.91 [ 2.09; 3.98]* | | 2.17 [-14.00; 3.81] |
| Relational Interaction | 0.50 [-14.72; 1.68] | 2.65 [-14.18; 4.17] | |
| Edges | -5.46 [ -5.75; -5.13]* | -6.30 [ -6.93; -5.83]* | -7.38 [ -8.58; -6.84]* |
| Network-years | 1981-2021 | 1981-2021 | 1981-2021 |
| Directed dyad-years | 24944 | 24944 | 24944 |

Note: Bootstrapped pseudolikelihood estimates, as described in Desmarais and Cranmer (2012), reported. Temporal bootstrapping is used to correct the standard errors. Standard errors are based on 1,000 network-year bootstrap iterations. The confidence intervals presented in brackets reflect the traditional 0.05 confidence level. Asterisks (*) indicate that the coefficient is statistically significant at or beyond the traditional 0.05 level. Daggers (†) indicate the coefficient is statistically significant at 0.1 level.