

Supplementary Materials for The Strategic Logic of Large Militant Alliance Networks

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Section A.1: MGAR Codebook

Unit of Analysis

The unit of analysis for this project is the directed dyad-year. This level provides a comprehensive and nuanced understanding of the relationship between actors that is still feasible to code. Compared to simple dyads, the directed dyad-year allows researchers to understand the dynamics of a given relationship over time rather than assuming a static, unchanging connection. In this way it facilitates analyses into the evolution of militant relationships.

Variable Coding: Inference and Confidence

Support variables are coded according to one's confidence in the available information for a particular year. Since this is the first research initiative designed to document the exact types of support and conflict occurring between violent nonstate actors, coders are not always able to locate the year-specific information necessary to document every particular variable for every year. As such, we have built a measure of reliability into the coding mechanisms of the support and conflict variables. Each variable is coded along a 0/1/2 scale: 0 refers to no evidence of support or conflict, 1 means that there was evidence of either support or conflict but it had to be inferred, and 2 means that the coder found specific information and is highly confident in the coding. As an example, consider financial support; when a source notes that financial transfers were sent from group A to group B in 1993 then it would be coded as 2 since confidence in this instance is very high. Similarly, if the source noted that in the early 1990s financial transfers were occurring between the two groups then one would still be confident in coding these years. However, if available information only details financial support in 1990 and again in 1992, and the coder—based on previous and subsequent relationship trends and the absence of any changes in the overall relationship—can be reasonably confident that financial support is likely to have continued between these years, then it would be coded as 1 since it has to be inferred. When information such as this has to be inferred, the coders are required to justify their coding in the “notes” section so that all inferences can be double-checked.

Universe of Relationships

It is the goal of this project to codify the relationships between violent, nonstate actors and other entities using the directed dyad-year as the unit of analysis. Consequently, relationships are included in the database when at least one actor in the dyad is a violent, nonstate group. For example, the Taliban's relationship with Pakistan can be coded post-2001 since at this point the Taliban is a nonstate actor. However, while the Taliban was the actual governing body of Afghanistan its relationship with neighboring Pakistan would not meet the criteria for inclusion since there is no nonstate actor in the dyad. As this demonstrates, once nonstate actors transition into accepted state or regional governing bodies they are only coded if they have a relationship with some other nonstate actor.

Variable Descriptions and Coding Rules

Actor Type — *actortype*

- *Description*: Categorical variable that signifies the type of organization that group 1 or 2 is. Note: the faction and splinter categories are relational.

- *Coding Rule:* There are 9 categories.
 - 1 = Violent nonstate actor: Nonstate organization attempting to alter the status quo through violent means. Motivated by political, social, religious, or economic goals.
 - 2 = State: Recognized, sovereign nation, or representative thereof.
 - 3 = Faction: An organization that has some independence but is still considered within the umbrella of the other actor in the dyad.
 - 4 = Splinter: Splinter organizations are those groups that were created by members of the other actor in the dyad. These members created a new, violent organization that is independent of the original group.
 - 5 = Diaspora: A diaspora refers to an ethnic or religious group in a foreign country.
 - 6 = Non-violent Social Movement: Nonstate organization attempting to alter the status quo through predominantly nonviolent means.
 - 7 = Political Party: Recognized political party in a state that is actively engaged in state, regional, or local politics.
 - 8 = Criminal Organization: Nonstate actor engaged in illegal activity predominantly for organizational or personal gain. No political, social, or economic goals are evident.
 - 9 = Other: Describe in “notes.”

Relationship Start — *relstart*

- *Description:* Dichotomous variable to signify the start of the relationship between the two actors.
- *Coding Rule:* Takes on the value of 1 in the first year of the dyadic relationship and 0 otherwise.

Relationship Type — *reltype*

- *Description:* The type of relationship exhibited between the two groups.
- *Coding Rule:* This variable seeks to categorize the intergroup relationship in the current year based on the type and level of cooperation, support, or conflict. There are seven relationship categories.
 - 1 = Allies: These groups exhibit extremely high cooperation in a combination of financial, material, logistical, and personnel support. Formal pledges or statements of support and shared membership are common. Overall strategy and major decisions are made by a centralized organization. One group may act as a surrogate or cell of the other. Allies represent the highest form of cooperation possible between organizations.
 - 2 = Associates: Associate groups exhibit moderate to high levels of cooperation with some combination of material, financial, logistical, and personnel support, and they are sympathetic to each other’s goals. Shared membership between the two groups is possible but typically minimal. One primary difference between associates and the higher-level allies is that operational planning between the groups is largely independent except for rare, cooperative attacks.

- 3 = Supporters: These organizations either support or share each other’s goals and provide moderate to low levels of assistance including a combination of financial, logistical, personnel or logistical support. Unlike either allies or affiliates, there is no shared membership and each group acts entirely independently. There is no evidence of attacks being coordinated between the two organizations.
- 4 = Fan: Refers to groups that are sympathetic to each other’s aims and typically make statements expressing their sympathy or support. However, there is no evidence of mutual membership flows or coordination. The fan may not be a violent nonstate actor, but some other societal actor. If support does exist between the groups, and it does not always exist, it is predominantly financial and minimally material with no evidence of personnel or logistical support.
- 5 = Host: Occurs between a nonstate actor and a state that is sympathetic to its goals. The state will generally provide territory and safety, but may also supply arms, funding, and possibly training. In return, the nonstate actor engages in violence in pursuit of shared goals.
- 6 = Rivals: Rivalries occur between two groups with differing goals. There is no cooperation between the two organizations, but they are not actively engaged in violence against each other. There is a possibility of some sporadic violence between the two but it does not appear to be coordinated by organizational leadership as part of a violent campaign to eradicate or destroy the rival group. There is likely to be evidence of antagonistic or otherwise hostile statements from group leaders.
- 7 = Competitors: Two groups with conflicting goals. In addition to opposing goals, each group is actively working to defeat the other. Violence and hostile statements are likely.
- 8 = Unknown: Cannot determine the relationship between groups.

Patron — *patron*

- *Description*: Captures whether one group in particular provides the majority of benefits in the relationship, or whether the relationship appears to more equal in terms of the distribution of benefits and resources.
- *Coding Rule*: Trichotomous variable that represents whether the relationship is largely reciprocal, or whether group 1 or group 2 is the primary patron and provides the majority of benefits to its counterpart. 0 = reciprocal relationship, 1 = group 1 primary patron, 2 = group 2 primary patron, 3 = unknown.

Financial Support — *finsupport*

- *Description*: Denotes evidence of financial support between groups in a given year.
- *Coding Rule*: This variable identifies whether there is evidence of financial transfers between nonstate actors in a given year. The focus of this variable is direct financial transfers between groups intended for assistance or the conduct of operations, for instance. This variable does not include money transferred as payment for weapons or other goods; it is intended to capture money that is provided without material compensation in return. 0 = no financial support, 1 = inferred financial support, 2 = confident of financial support, 3 = unknown.

Material Support — *mat*support

- *Description:* Denotes evidence of material support between groups in a given year.
- *Coding Rule:* Material support is defined as the transfer of arms, munitions, or other goods between groups. Such support includes the sale or trade of weapons between groups as well as donations and gifts (non-monetary) that are provided without direct compensation. Thus, weapons that are either sold or more simply supplied to another organization would fit into this category. 0 = no material support, 1 = inferred material support, 2 = confident of material support, 3 = unknown.

Training Support — *train*support

- *Description:* Denotes evidence of training or sharing strategic, tactical, or operational information between actors in a given year.
- *Coding Rule:* This variable identifies evidence of training or the intentional transfer of useful information between actors. This might include actions such as: sending members abroad to train under another organization, providing information or advice on how to establish financial networks, allowing members of other groups to attend one's training camps, and leaders meeting to share information, plans, strategies and/or general organizational advice. 0 = no training or logistical support, 1 = inferred training or logistical support, 2 = confident of training or logistical support, 3 = unknown.

Operational Support — *ops*support

- *Description:* Denotes evidence of personnel support between groups in a given year.
- *Coding Rule:* Personnel support is when members from one group assist with or carry out operations designed by another actor. This would include: members from one group carrying out a suicide attack planned by a different group, providing scouts or reconnaissance for another group, or providing shelter to members of another group. In other words, personnel support is when members from one group aid in the actual operations or conduct of a separate group. 0 = no personnel support, 1 = inferred personnel support, 2 = confident of personnel support, 3 = unknown.

Territorial Support — *terr*support

- *Description:* Denotes evidence of one actor—either a state or a nonstate actor—providing territory or safe haven to another actor.
- *Coding Rule:* Territorial support is when one group, which controls land of its own, permits another actor to use that land. Land can be used for: training, as a safe haven, to rearm and reequip, or to launch operations. 0 = no territorial support, 1 = inferred territorial support, 2 = confident of territorial support, 3 = unknown.

Rhetorical Conflict — *conflict*

- *Description:* Denotes whether groups are in a state of conflict but have not yet resorted to physical attacks on one another.

- *Coding Rule:* Conflict that is short of physical represents groups that are verbally antagonistic or preparing to engage in conflict. This can include actions such as: preparations with the intent of engaging in future conflict that does not transpire in the current year, verbally antagonistic declarations against others such as fatwas or similar calls to arms, or denunciations of other groups. 0 = none, 1 = inferred non-physical conflict, 2 = confident of non-physical conflict, 3 = unknown.

Physical Conflict — *physconflict*

- *Description:* Denotes whether groups are engaged in physical conflict with one another in a given year.
- *Coding Rule:* Physical conflict refers to actual or attempted attacks on the property or members of rival nonstate groups. Thus, a failed attack still represents that two groups are engaged in physical conflict. Examples include: attacks on rival group members or headquarters, attempts to destroy the equipment and arms of competitor organization, and assassination attempts. 0 = no physical conflict, 1 = inferred physical conflict, 2 = confident of physical conflict, 3 = unknown.

Left — *left*

- *Description:* Denotes whether group 1 or 2 is a leftist organization.
- *Coding Rule:* Leftist groups are organizations that advocate policies related to wealth redistribution, socialism, communism and Marxism. 0 = no, 1 = yes, 2 = unknown.

Right — *right*

- *Description:* Denotes whether group 1 or 2 is a right-wing organization.
- *Coding Rule:* Rightist groups are organizations that advocate policies related to capitalism, free market economics, or others that preserve the status quo. 0 = no, 1 = yes, 2 = unknown.

Environmental — *environ*

- *Description:* Denotes whether group 1 or 2 is an environmental organization.
- *Coding Rule:* Environmental organizations are those groups with objectives and goals related to environmental or climate concerns. 0 = no, 1 = yes, 2 = unknown.

Nationalist — *nation*

- *Description:* Denotes whether group 1 or 2 is a nationalist organization.
- *Coding Rule:* Nationalist organizations are those with goals relating to self-determination, secession, or regime change. 0 = no, 1 = yes, 2 = unknown.

Religion — *relig*

- *Description:* Denotes the religious identity of group 1 or 2.

- *Coding Rule:* Actors are coded with a particular religion when it is a driving force behind the organization, significantly influencing their goals, actions, membership, or rhetoric. 0 = none, 1 = Sunni, 2 = Shia, 3 = Salafist, 4 = other Islamic (e.g. Sufi), 5 = Christian, 6 = Jewish, 7 = other (e.g. Hindu, Buddhist), 8 = unknown. We consider Sunni and Salafi groups as sharing religion.

Organizational Split — *orgsplit*

- *Description:* Denotes whether group 1 or 2 witnessed an organizational split creating a new violent nonstate actor in the current year.
- *Coding Rule:* This variable concerns organizational splits that result in new groups or entities that are separate from the structure and membership of the original group. This includes new organizations and splinter groups that are formed by members of the original group. This variable should also include the formation of new wings, division, or cells that act separately and to a large degree independently from the old organization. Members of the original group form these new organizations – possibly along with outside members – but these new groups are significantly independent from their parent organization. This variable is only concerned with new, violent nonstate actors; it does not consider the formation of a political party from group members as an organizational split. 0 = no split, 1 = organization split, 2 = organizational split with leaders involved, 3 = unknown.

Defections — *defect*

- *Description:* Denotes whether group 1 or 2 experienced defections in a given year.
- *Coding Rule:* Defections are defined as members of the organization leaving the group to either pursue nonviolence (join a political or social movement), abandoning their original goals entirely, defecting to the state (often in return for amnesty or some other form of conciliation), or to join a rival violent nonstate actor. 0 = no defections, 1 = defections occur, 2 = defections occur with leaders involved, 3 = unknown.

Confidence — *confidence*

- *Description:* Ordinal variable that captures the coder's confidence in the information for a given year.
- *Coding Rule:* This variable serves as a measure of how confident the coder is in the information he or she coded for a given year. There are four categories
 - 0 = Very Low: Signifies a general lack of reliable information on the relationship and no year-specific information.
 - 1 = Low: Signifies that there is some general information available on the relationship but no information on yearly changes.
 - 2 = Medium: Signifies a mix of reliable information and some year-specific information. The coder is confident in the coding but a portion of the information has to be inferred from general descriptions of the relationship.
 - 3 = High: Signifies significant information available, both in terms of the general relationship and more specific yearly interactions, and the coder is highly confident of the information for a given year.

Notes — *notes*

- *Description:* Open field reserved for researchers' notes.

References — *references*

- *Description:* Open field reserved for researchers to input citations.

Section A.2: Data Description

Data from MGAR reveal a number of important patterns in militant cooperation. As reflected in Figure A.1, the absolute number of alliances between militant groups is substantial. In general, alliances were relatively more common between 1965 and 1980, before declining from 1980 to 1990, and then increasing steadily again from 1990. The degree of militant cooperation—both initiation and durability—peaked in relative terms in 1970. These trends in militant cooperation reflect well-known political dynamics. From 1965 to 1980, the systemic political environment was characterized by decolonization struggles, global ideological contestation, and substantial state sponsorship of militant organizations, all of which facilitated alliance formation and maintenance by injecting militant groups with resources and revolutionary ideological currency.

As the decolonization concluded and the Cold War waned from 1980 to 1990, militant cooperation declined in absolute and relative terms. The dissolution of multiethnic empires and the proliferation of weak states in this period gave rise to the creation of many new militant groups (i.e. potential alliance partners), but waning ideological contestation and state sponsorship reduced ideological and material resources vital for alliance formation and maintenance. Intuitively, Figure A.2 shows that the relative decrease in cooperation in this era is driven by a decline in alliances between leftist groups, precisely those most affected by the decline of ideological contestation and state sponsorship in the late Cold War.

Since 1990, militant cooperation has increased steadily. This increase is driven by the rise of alliances between groups sharing a religious ideology. As religious ideologies, especially Salafism, supplanted communism as the dominant global, militant ideological currency after the Cold War, religiously-oriented cooperation proliferated. By 2016, the global proportion of militant dyads that were allied rebounded to its 1980-level. As of 2016, there were 40 rhetorical

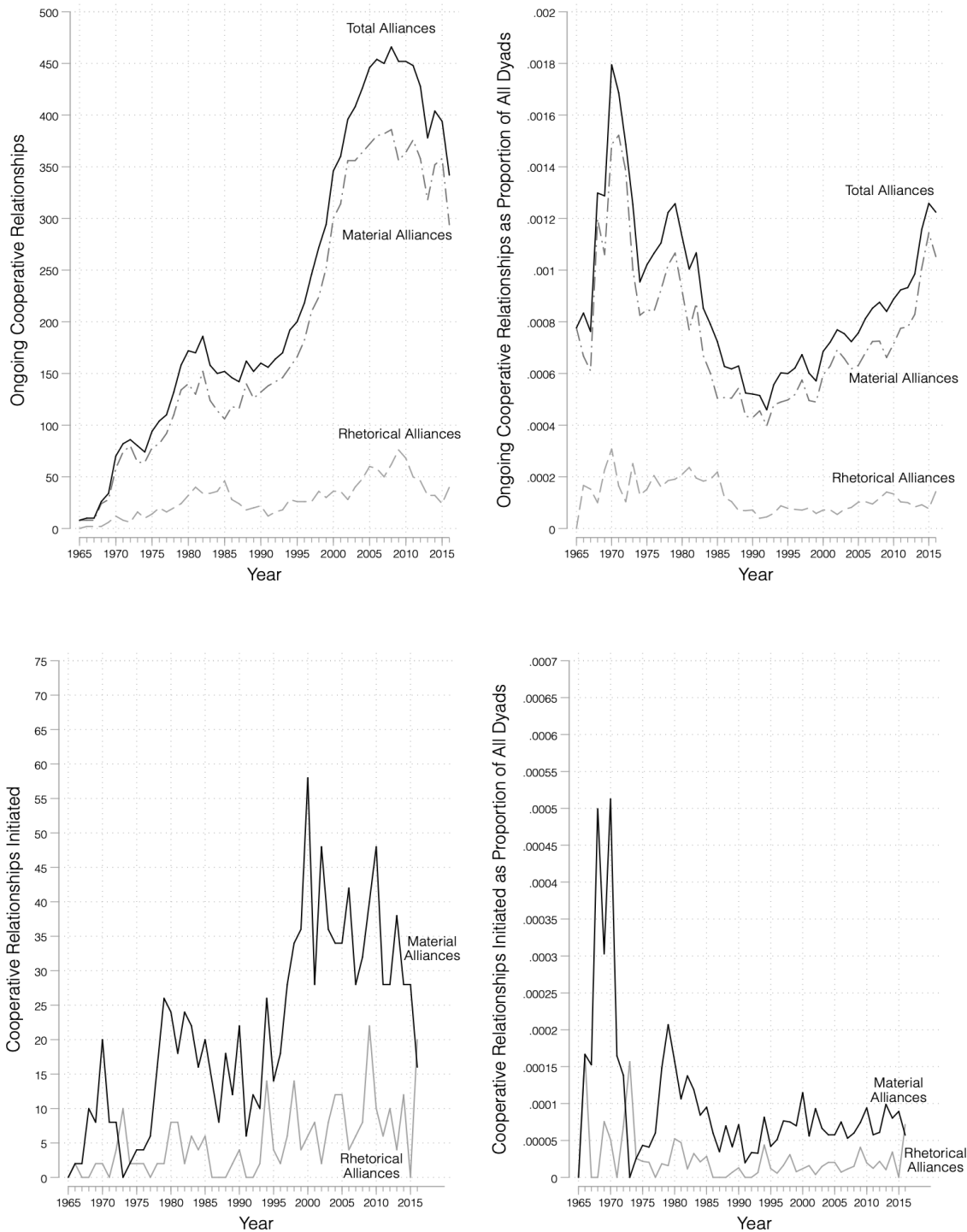
and 294 material alliances between militant groups, including 20 rhetorical and 16 material alliance initiations. These figures amount to cooperation in more than one-tenth of one percent of all militant undirected dyads worldwide.

Alliance initiation has remained relatively constant since the mid-1980s, and has not increased along with the total increase in militant cooperation since 1990. This suggests that the total increase in militant cooperation is driven in large measure by the growing durability of alliances, not by an increased ability of groups to form alliances in the post-Cold War era. This insight suggests the possibility that alliance initiation and maintenance have different causes, and particularly that shared ideology (e.g. co-religion) may be more important for sustaining than initiating cooperation under repression.

Apart from broad trends in the degree of militant cooperation, Figure A.1 also reveals an important difference in patterns of rhetorical and material cooperation. In particular, material alliances are far more frequent than rhetorical alliances, accounting for about 84% of all alliance-years in the data. While the degree of rhetorical cooperation is relatively constant over time, material cooperation is subject to far more temporal variation, with peaks in the periods from 1965 to 1980 and 1990 to 2016. Looking at alliance formation, rhetorical alliance initiation only outpaces material alliance initiation in two years—1973 and 2016. In 1973, the stark increase in rhetorical alliance formation reflects the rise of non-material cooperation between prominent, mostly leftist groups in the Middle East, Western Europe, and Latin America. Responding to increasing repression in the wake of events like the Munich massacre, the Yom Kippur War, and the Ezeiza massacre in Argentina, leftist/communist groups mobilized to rhetorically support ideological compatriots around the world. The 2016 surge in rhetorical alliance formation reflects a deliberate strategy by ISIS to legitimate its claim of a caliphate by extracting loyalty pledges from a network of global affiliates. Some of those initially rhetorical alliances have since matured into material alliances.

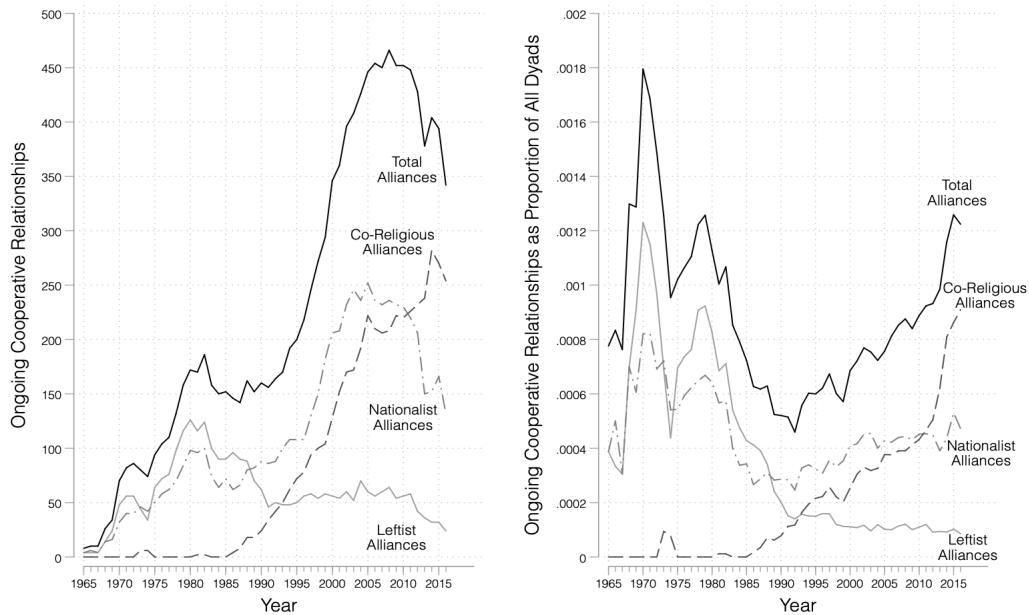
Many of the most lethal militant alliance networks, such as those of ISIS, stretch across continents; at the the same time, large militant networks also emerge within individual countries. Because the MGAR data capture relationships for a large, global sample of militant groups, they offer a unique opportunity to explore the dynamics of domestic versus transnational cooperation.

Figure A.1: Militant Alliances by Type



Note: The top left panel depicts the total number of alliances between militant groups over time disaggregated by the type of alliance. Material alliances are defined as those in which at least one of the following are exchanged: operational, material, territorial, training, or financial support. Rhetorical alliances are defined as those in which groups are cooperative but physical support is absent. The top right panel normalizes the number of alliances over time by the total number of undirected dyads per year. The bottom left panel depicts the total number of alliance initiations between militant groups over time disaggregated by the type of alliance. The bottom right panel normalizes the number of alliance initiations over time by the total number of undirected dyads per year.

Figure A.2: Militant Alliances by Shared Ideology



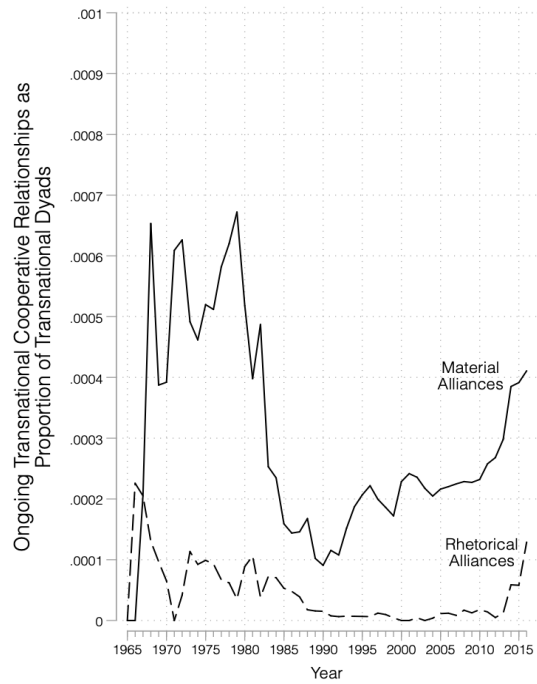
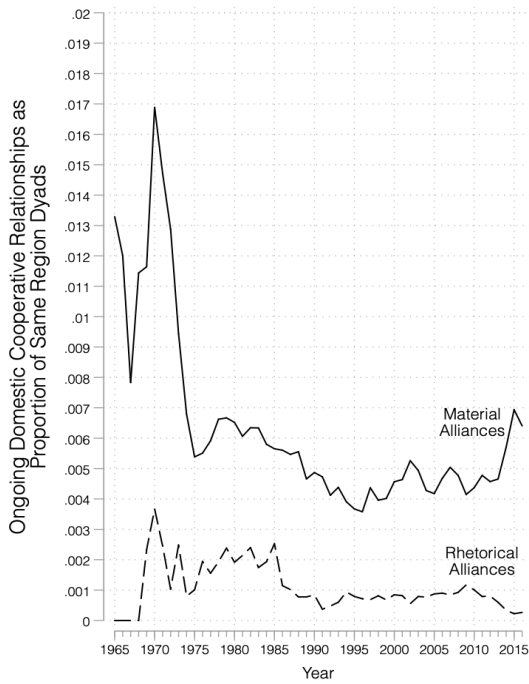
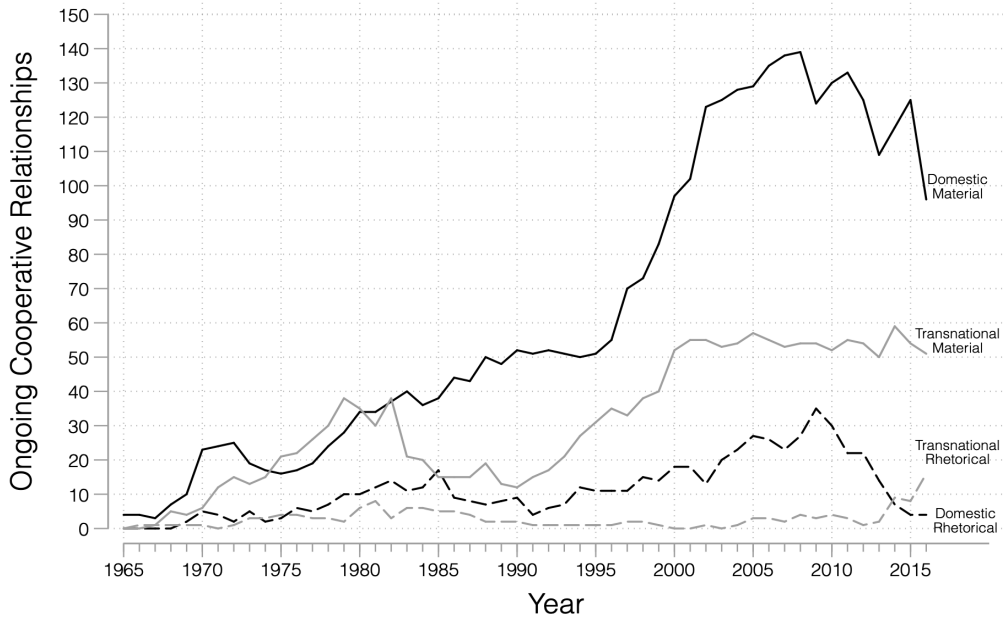
Note: The left panel depicts the total number of alliances between militant groups over time disaggregated by the ideology allies share. The right panel normalizes the number of alliances over time by the total number of undirected dyads per year. We also record alliances between groups sharing right-wing and environmentalist ideologies, but religion, nationalism/separatism, and leftism/communism are overwhelmingly the most common ideologies shared within alliances.

Figure A.3 distinguishes alliances between groups based in the same or neighboring countries (domestic) from alliances between groups based in non-contiguous countries (transnational). Domestic alliances are more common, accounting for about 68% of all alliance-years. Notably, the ebb and flow of domestic and transnational cooperation follow similar trends over time.

Table A.1 provides summary statistics for core variables in our data for all dyad-years and for cooperative dyad-years. These offer a broader portrait of the MGAR data and echo many of the insights highlighted graphically in Figures A.1 through A.3. The alliance content variables, including the disaggregation of material and rhetorical alliances, correspond to the content variables described above, while the relationship type variables correspond to the categorical coding described above. The data show that of the five types of support we code, operational support is

Many explicitly domestic groups operating in peripheral regions of weak states ally with similarly motivated groups operating in close proximity but based across official borders. For instance, the Democratic Forces for the Liberation of Rwanda cooperated with the National Liberation Front of Burundi in the Second Congo War (same conflict ecosystem), despite the groups technically being based in different countries. All results are substantively identical if we define domestic alliances as those between groups based only in the same country.

Figure A.3: Militant Alliances by Geographic Scope



Note: The top panel depicts the total number of alliances between militant groups over time disaggregated by the geographic scope of the alliance. Domestic alliances are between groups based in the same region (defined as the same country or contiguous countries). Transnational alliances are between groups based in non-contiguous countries. The bottom left panel normalizes the number of alliances over time by the total number of undirected dyads in the same region per year. The bottom right panel normalizes the number of alliances over time by the total number of transnational undirected dyads per year.

most common, occurring in about 65% of all alliance dyad-years. Training and material support are also frequent, occurring in 57% and 56% of alliance dyad-years respectively; territorial and financial support are less common, occurring in 40% and 48% of alliance dyad-years respectively. The mean and median number of forms of support exchanged in an alliance dyad-year is 3, indicating that most militant cooperation yields the exchange of relatively numerous and robust material resources.

Ideology is shared within more than 91% of all alliance dyad-years. Shared religion is particularly significant—religion is shared within just 6% of all undirected dyad-years but within 37% of alliance dyad-years. Consistent with work on state sponsors, we find that shared sponsorship also occurs disproportionately in alliance dyad-years. Finally, even in the summary statistics it is clear that most militant groups generally, and most alliances dyad-years specifically, operate in highly repressive contexts.

Table A.1: MGAR Summary Statistics

	All Undirected Dyad-Years					Alliance Undirected Dyad-Years				
	Obs.	Mean	Std. Dev.	Min.	Max.	Obs.	Mean	Std. Dev.	Min.	Max.
Alliance Content:										
Material Alliance	7,402,203	.0007	.026	0	1	5,918	.841	.365	0	1
Rhetorical Alliance	7,402,203	.0001	.010	0	1	5,918	.126	.332	0	1
Content Sum	7,402,203	.002	.093	0	5	5,918	2.655	1.831	0	5
Operational Support	7,402,203	.0005	.023	0	1	5,918	.652	.476	0	1
Material Support	7,402,203	.0005	.021	0	1	5,918	.556	.497	0	1
Territorial Support	7,402,203	.0004	.020	0	1	5,918	.479	.500	0	1
Training Support	7,402,203	.0005	.022	0	1	5,918	.571	.495	0	1
Financial Support	7,402,203	.0003	.018	0	1	5,918	.397	.489	0	1
Relationship Type:										
Allies	7,402,203	.0002	.015	0	1	5,918	.282	.450	0	1
Associates	7,402,203	.0003	.016	0	1	5,918	.320	.467	0	1
Supporters	7,402,203	.0002	.014	0	1	5,918	.255	.436	0	1
Hosts	7,402,203	.0000005	.002	0	1	5,918	.006	.077	0	1
Fans	7,402,203	.0001	.010	0	1	5,918	.136	.343	0	1
Rivals	7,402,203	.00009	.009	0	1	—	—	—	—	—
Competitors	7,402,203	.0001	.011	0	1	—	—	—	—	—
Dyadic Characteristics:										
Shared Ideology	7,402,203	.576	.494	0	1	5,918	.915	.279	0	1
Shared Religion	7,402,203	.063	.244	0	1	5,918	.367	.482	0	1
Shared Leftism/Communism	7,402,203	.136	.343	0	1	5,918	.263	.440	0	1
Shared Nationalism/Separatism	7,402,203	.372	.483	0	1	5,918	.516	.500	0	1
Shared Right-Wing	7,402,203	.093	.291	0	1	5,918	.040	.195	0	1
Shared Environmentalism	7,402,203	.0002	.013	0	1	5,918	.0007	.026	0	1
Repression	7,371,667	1.825	.776	-3.386	3.767	5,917	1.720	.883	-2.009	3.370
Shared State Sponsor	6,083,384	.0003	.018	0	1	5,474	.046	.208	0	1
Capability Ratio	7,402,203	.623	.216	.500	1	5,918	.765	.235	.500	1
Age (Group 1)	7,402,203	15.722	14.504	1	151	5,918	16.654	12.991	1	120
Age (Group 2)	7,402,203	14.806	15.981	1	151	5,918	17.664	15.192	1	121
Age Difference	7,402,203	14.728	15.153	0	150	5,918	11.174	12.080	0	116
Geographic Scope:										
Same State	7,402,203	.034	.182	0	1	11,836	.481	.500	0	1
Same Region	7,402,203	.091	.288	0	1	11,836	.678	.467	0	1
Transnational	7,402,203	.889	.314	0	1	11,836	.315	.464	0	1