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Networks of Cooperation: Rebel Alliances in Fragmented Civil Wars

Emily Kalah Gade[1], Michael Gabbay[2], Mohammed M. Hafez[3], and Zane Kelly[2]

Abstract

When rebels make alliances, what informs their choice of allies? Civil wars are rarely simple contests between rebels and incumbent regimes. Rather, rival militant networks provide the context in which these fragmented conflicts unfold. Alliances that emerge within this competitive landscape have the power to alter conflict trajectories and shape their outcomes. Yet patterns of interrebel cooperation are understudied. The existing scholarship on rebel alliances focuses on why rebels cooperate, but little attention is given to the composition of those alliances: with whom rebels cooperate. We explore how power, ideology, and state sponsorship can shape alliance choices in multiparty civil wars. Employing network analysis and an original data set of tactical cooperation among Syrian rebels, we find compelling evidence that ideological homophily is a primary driver of rebel collaboration. Our findings contribute to an emerging literature that reasserts the role of ideology in conflict processes.

Keywords

Syria, civil war, fragmentation, alliances, social network analysis, ideology

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Civil wars are rarely simple contests between unified rebels and incumbent regimes. Instead, they usually feature divided rebel movements with multiple factions competing over leadership, territory, resources, and fighters (Bakke, Cunningham, and Seymour 2012). Forging unity among armed groups is a challenge because credible commitment problems make binding obligations difficult to initiate and sustain. Cooperation also involves trade-offs between enhancing one's power capabilities and decision-making autonomy, which may incline some rebels to forgo alliances that diminish their independence. Ideological considerations also affect rebel cooperation: factions that harbor competing visions for the future are likely to view alliances with rivals as short-lived exigencies at best. Yet despite these barriers, cooperation among armed factions does occur. Between 1946 and 2008, 181 of the 345 groups in civil wars, more than 52 percent, "have initiated positive associations with each other while fighting with the government" (Akcinaroglu 2012, 890).

The prevalence of rebel cooperation alongside competition generates two puzzles: why do rebels cooperate and with whom do they cooperate? Literature on rebel cooperation has focused on the *why* question. Interrebel alliances emerge between factions seeking to augment their capabilities and improve their tactical productivity (Lichbach 1995), balance against their rivals through minimum winning coalitions (MWCs; Christia 2012), and increase their overall odds of victory by institutionalizing joint command and control of military operations (Akcinaroglu 2012). Little is known, however, about the factors that shape the composition of rebel alliances, that is, *with whom* rebels cooperate. Civil wars can involve hundreds of rebel brigades, which could produce countless cooperative alignments. This translates into rebels having choices when pursuing cooperation to achieve their conflict objectives. What explains their choice of allies?

In addressing this puzzle, we make distinct theoretical, methodological, and empirical contributions. Theoretically, we explore three logics of alliance composition related to ideology, power, and state sponsorship and make predictions about how they might shape militant collaboration. We posit that ideological proximity in rebel networks should yield greater militant cooperation than ideological distance, thus challenging the prevailing assumption that ideology is a minor consideration in alliance formation (Christia 2012). We operationalize ideology in civil wars along three dimensions—*conflict framing*, *conception of the ideal polity*, and *territorial aspiration*—and show that agreement within those issue areas facilitates cooperation among rebel factions. Through conflict framing, a rebel group identifies whom it is primarily fighting for and against, casting both in-group and out-groups with respect to its preferred cleavage whether ethnic, religious, economic, or political. A group's conception of the ideal polity identifies its vision for the postconflict social and political order and its territorial aspiration identifies the boundaries of this future order. Unpacking ideology into these distinct dimensions allows for a more nuanced understanding of factional alignments than the classification of rebels into broad categories such nationalists, separatists, socialists, and fundamentalists.

We complement our ideological analysis with a thorough consideration of how power and state sponsorship inform alliance choices. For power, we propose contrasting hypotheses of symmetrical and asymmetrical alliance formation. We posit that an overriding concern for capability aggregation in rebel movements will tend to produce *symmetric alliances* (cooperation between groups of comparable strength), whereas the desire of strong groups to form alliances that maximize decision-making autonomy vis-à-vis rivals will generate *asymmetric alliances* (cooperation between groups of dissimilar power capabilities). As for state sponsorship in rebel alliances, we test the hypothesis that rebel groups that share the same state sponsor will cooperate more frequently than those with no overlapping external sponsors.

Methodologically, we employ social network analysis to yield insights into rebel cooperation within fragmented conflicts. Network approaches are widespread in political science, yet few have sought to apply them to multiparty civil wars (Zech and Gabbay 2016; Metternich et al. 2013). Research on civil conflicts calls for a network approach because rebel groups do not make choices to align with others in a vacuum, but rather their choices are likely to hinge on the alliance preferences of the other groups in the rebel movement. Thus, social network analysis can better capture the theoretical patterns we would expect to observe than the standard statistical assumption of independence of observations when examining dyads in multiparty civil wars. We use additive and multiplicative effects (AME) models to evaluate the relationships between our three proposed variables simultaneously. In addition, as a robustness check, we use simulations of network tie formation to augment these findings.

Empirically, we test our hypotheses as they relate to factional cooperation in Syria's civil war. One of the world's bloodiest conflicts, the Syrian rebellion features a complex set of actors with local, regional, and international ties. We use primary insurgent sources, including more than 9,000 unique claims of attacks, to construct an original data set for more than 220 insurgent groups active since the onset of conflict through mid-2015. We form a network of militant tactical cooperation from claims of joint operations and investigate its structure with respect to ideology as obtained from manual coding of primary source materials, power as measured by group size, and state sponsorship as reported in informed secondary sources. We find compelling evidence that ideological homophily is a driver of rebel cooperation in Syrian militant networks. We also find some evidence in favor of symmetric alliances rather than asymmetric ones, but it is inconsistent across our analysis. However, we do not find support for the proposition that overlapping state sponsorship in rebel dyads increases cooperation.

The question of alliance composition has important strategic implications. Understanding the dynamics of rebel cooperation can yield policy insights for prompting or dissuading alliances between rebel groups in multifactional civil wars. Recent conflicts illustrate vividly how the composition of rebel alliances can shape conflict trajectories in dramatic ways. In 2007, American-led coalition forces in Iraq successfully exploited rifts in rebel unity to turn the tide in the war. Nationalist

insurgents became increasingly alienated by Al-Qaeda in Iraq, their former jihadist ally, and as such were willing to switch sides to the American coalition. The dissolution of the nationalist–jihadist alliance contributed to a substantial reduction in violence, until the resurgence of the Islamic State six years later.

In contrast, the United States viewed with concern the fragmentation of Syria's rebel movement, preferring a unified and cohesive rebel alliance composed of moderate rebel factions that could topple the Assad regime. The United States, however, could not overlook the presence of extreme Islamist factions in the rebel movement and thus deprioritized the objective of rebel unity. Ultimately, it limited its support to a narrow sector of acceptable militant groups, which proved ineffective against an incumbent regime backed by a unified and powerful coalition consisting of Iran, Hezbollah, and Russia.

Beyond these recent examples, the literature on rebel fragmentation points out that (dis)unity has important implications for several other conflict processes. Civil wars with divided rebel factions last longer, are more violent, and have higher rates of recurrence than wars with unified rebel movements (Cunningham, Bakke, and Seymour 2012; Wood and Kathman 2015; Driscoll 2012; Cunningham 2013; Rudloff and Findley 2016). Conversely, movements led by a hegemonic faction are more likely to be successful than more diffuse movements (Krause 2017). By illuminating the drivers of rebel cooperation, this study, therefore, makes a contribution to understanding a dynamic of great consequence in fragmented conflicts.

Ideology in Rebel Alliances

Rebel groups have political preferences and moral visions for which they are fighting. The preceding century has highlighted the capacity of Marxist, nationalist, fundamentalist, and fascist ideologies to mobilize millions of people for revolutions, insurgencies, civil wars, and genocide. Although not all civil conflicts are driven by ideological divides and not all rebels are motivated by ideological considerations, diversity of political demands typify fragmented civil conflicts, which are the most common form of wars today (Seymour, Bakke, and Cunningham 2016, 5, 6; Jones 2017, 168).[1]

Recent scholarship has rediscovered the critical role that ideology plays in conflict processes (Ugarriza and Craig 2012; Costalli and Ruggeri 2015; Staniland 2015; Balcells 2017). Ideology is a source of collective identity and can help forge group cohesion in the context of civil wars by orienting commanders and foot soldiers toward a clear set of objectives (Gutiérrez Sanín and Wood 2014). It can also motivate commitment and sacrifice, remove inhibitions to violence, and reprioritize collective incentives above self-regarding considerations (Lichbach 1995, 92, 93; Walter 2017, 19, 20; Kim 2018, 308). Additionally, ideological socialization has been shown to improve battlefield discipline and dissuade defections to the state (Oppenheim et al. 2015; Hoover Green 2016).

We contribute to this burgeoning literature by proposing mechanisms that link ideology to the choice of allies in rebel movements, thus challenging the prevailing

assumption in the literature that ideology is a secondary consideration in alliance formation. We expect these mechanisms to apply to the spectrum of cooperative relationships ranging from joint operations at the tactical level to formal alliances at the strategic level. Joint operations (our empirical measure) consist of two or more rebel groups conducting an attack together (Bapat and Bond 2012, 19). We focus here on tactical collaboration because only 17.6 percent of rebel cooperation between 1946 and 2008 was at the level of formal alliances (Akcinaroglu 2012, 890).

Joining Gutiérrez Sanín and Wood (2014, 215), we define ideology as "a more or less systematic set of ideas that includes the identification of a referent group (a class, ethnic, or other social group), an enunciation of the grievances or challenges that the group confronts, the identification of objectives on behalf of that group (political change—or defense against its threat), and a . . . program of action." We operationalize this definition by disaggregating ideology along three axes: *conflict framing*, *conception of the ideal polity*, and *territorial aspiration*. Each of these dimensions suggests causal mechanisms that link ideology to rebel alliances.

Conflict framing refers to how rebel factions demarcate the core political, religious, or social categories that constitute one's in-group and out-groups.[2] A group's conflict frame specifies its preferred conflict dyad, the out-group most threatening to the in-group. In Iraq, for example, nationalist insurgents opposed to America's 2003 invasion of their country employed a resistance frame of Iraqis versus American occupation forces as their primary conflict frame; the Iraqi government and Shiite militias were viewed as mere instruments of America's occupation. In contrast, jihadist groups, especially Al-Qaeda in Iraq, framed the conflict as a sectarian struggle between Sunnis and Shiites, whereby American forces enabled Shiites to dominate Sunnis. In each instance, conflict framing implies that threats from a particular out-group are more salient than others and that certain parties to the conflict could conceivably cooperate while others are unthinkable; Sunni nationalists could ally with Shiites, whereas sectarian jihadist groups could not. Thus, the conflict frame in-group bounds the choice of allies.

As a group's conflict frame helps determine whom it attacks, conflict framing may also indirectly promote cooperation to the extent that groups with similar targeting portfolios can more easily cooperate. For example, two rebel groups—one nationalist and one sectarian—may both primarily target the state's security forces, yet the first casts them as the goons of a tyrannical regime while the second casts those same forces as the soldiers of the rival sect. Although the pair could cooperate on the basis of this common targeting, if the sectarian framing is also extended to justify indiscriminate and controversial attacks against rival sect civilians (included within the nationalist in-group), then the associated dissension would inhibit cooperation.

Conception of the ideal polity is the normatively prescriptive dimension of ideology that orients members to a vision of the desired end state. It specifies how groups define a legitimate sociopolitical order that is worth fighting for, deeming some institutional arrangements appropriate while viewing others as unjust, inequitable, oppressive, or even heretical. This dimension captures the traditional ideological

divides such as the competition between the economic left and right, democrats and authoritarians, and secularists and fundamentalists. When choosing to form alliances, we expect rebels to align with those that offer mutual political corroboration and are working toward similar objectives. Groups with fundamentally divergent postconflict goals or territorial aspirations will have a greater ideological distance to traverse in order to achieve cooperation.

Territorial aspiration delineates the boundaries of the ideal state and orients rebels to the territorial claims of the movement. This dimension captures the degree to which rebels seek to maintain or violate the territorial integrity of their states.[3] Movements with shared conceptions of the ideal polity sometimes diverge over the territorial boundaries of that polity. For example, parties representing Basques and Catalans in Spain diverge on the issue of maintaining local autonomy or insisting on separatism as do Scots in the United Kingdom. Arab nationalists in their heyday were divided between advocates of *wataniyya* (homeland patriotism) and *qawmiyya* (pan-Arab unification). Islamists today are divided between those who favor establishing an Islamic order within the framework of the modern national state and those who harbor the irredentist ambition of restoring an Islamic caliphate.

Like the previous dimensions, territorial aspiration is a potential source of unity or division. Separatist groups, for example, may be unwilling to compromise their own territorial demands, creating friction with nationally focused groups. Territorial aspirations are likely to accentuate disagreements between factions as a conflict becomes protracted. Groups that care about the territorial integrity of their states may incline toward a negotiated end to the conflict in order to restore national unity. Those that harbor broader territorial ambitions are less likely to prioritize national unity as the conflict persists and may be inclined to sabotage conflict-ending negotiations.

Agreement on conflict framing, ideal polity, and territorial aspiration, therefore, predict *ideological homophily* in network ties. A fundamental principle of social network analysis, homophily states that "similarity breeds connection," and social networks tend to be largely homogenous because ties between dissimilar individuals dissolve more quickly (McPherson, Smith-Lovin, and Cook 2001, 415, 16). Homophily prevails because of the presumption of mutual trust and complementarity of interests among actors with uniform attributes (Lichbach 1995, 138-41) and because joining similar others reinforces the cognitive bias toward belief confirmation in polarized political contexts (Balliet et al. 2018). Political homophily has been observed at the individual, organizational, and state levels including life style politics (DellaPosta, Shi, and Macy 2015), online activism (Boutyline and Willer 2017), local government regional planning networks (Gerber, Henry, and Lubell 2013), international trade networks (Maoz 2012), third-party state interventions (Corbetta 2013), and international alliances (Werner and Lemke 1997; Lai and Reiter 2000). We anticipate ideological homophily will also shape rebel alliance choices, yielding our ideology hypothesis:

Hypothesis 1: Ideological alliances: Interrebel cooperation is more likely among ideologically similar groups than ideologically dissimilar ones.

Complementary Logics of Alliance Formation

We consider two logics of alliance composition based on power and state sponsorship, which may operate in conjunction with ideological homophily.

Power in Rebel Alliances

In the most extensive analysis of rebel cooperation, Christia (2012, 240) advances the power-centric theory of MWCs, which are "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." Absent credible commitments, however, weaker alliance members grow wary of their stronger partner as the alliance nears victory. Hence, the theory predicts coalitional instability as rebels regularly switch sides, thereby maintaining a rough balance of power. Apart from this balancing constraint, the theory remains silent on the composition of the rival coalitions. To the extent that the MWC theory considers the credible commitments problem at its utmost severity, it expects little association between ideology and militant cooperative relationships (Christia 2012, 32, 33).

We propose two contrasting hypotheses about how relative power considerations may affect alliance composition beyond balancing constraints. The first relates to *symmetric alliances* (cooperation between groups of similar power capabilities). Rebel groups in search of greater security may form alliances to aggregate their capabilities against mutual threats.[4] Given that the pooling of assets and coordination of tactics becomes more difficult as the number of groups grows, two powerful groups can cooperate more efficiently than a coalition consisting of a powerful group and multiple minor groups.[5] If powerful factions prefer to coordinate with each other, that leaves weak factions to ally with other minor players. Thus, our first power hypothesis predicts:

Hypothesis 2: Symmetric alliances: Interrebel cooperation motivated by mutual security concerns will produce cooperative network ties between groups of comparable power capabilities.

Rebel groups may also seek to maximize their decision-making autonomy in addition to augmenting their capabilities through asymmetric alliances—cooperation between major and minor rebel groups.[6] Groups that do not feel particularly threatened by the regime may prioritize winning on their own terms. Powerful rebels, in particular, can afford to emphasize enhanced autonomy over security by forming alliances with weaker partners amenable to influence. The weaker faction receives greater security from its alignment with a powerful group, while the dominant rebel faction benefits from both capability aggregation and control over the conduct of minor groups. Thus, we hypothesize:

Hypothesis 3: Asymmetric alliances: Interrebel cooperation motivated by security and autonomy considerations will produce cooperative network ties between groups with dissimilar power capabilities.

State Sponsorship in Rebel Alliances

External sponsorship of rebel movements is a common feature of civil wars.[7] Rebels covet military, financial, and political support to outmatch the resources of their incumbent regimes, establish international legitimacy, exercise leverage in negotiations, and outcompete rivals. As Gurr (1970, 269) observed long ago, "The greatest potential increment to dissident military capacity is external support." Indeed, Jones (2017, 136) finds that insurgent movements that receive great power support win nearly half to two-thirds of the time.

External patrons provide arms, money, supplies, or sanctuaries to rebel groups in the expectation that these rebels will exhibit sufficient discipline and solidarity to fulfill their patron's strategic aims (Salehyan 2010). Bapat and Bond (2012) and Popovic (2018) view external leverage as an important interrebel institution that can help overcome the credible commitments problem, police against side negotiations, and mediate conflicts between rebel groups. This predicts greater interrebel cooperation because sponsors can threaten to withhold financing and war materiel from those who are jeopardizing a cohesive rebel coalition (Lichbach 1995, 179).

However, state sponsors can also undermine rebel unity by incentivizing some rebels to challenge their rivals (Tamm 2016). This is particularly the case when multiple state sponsors with competing political agendas seek to foster their own proxy clients through patronage. The presence of multiple sponsors increases the number of avenues rebel groups have to support themselves and reduces the leverage any individual external patron can exert to foster cohesive rebel coalitions (Salehyan, Siroky, and Wood 2014).

Acknowledging these contradictory effects of state sponsorship on rebel alliances, we propose that two rebel groups that share a single sponsor are more likely to cooperate with one another than dyads with distinct sponsors. This yields our final hypothesis:

Hypothesis 4: State sponsored alliances: Rebel groups that derive support from the same state sponsor will experience greater cooperation than those lacking a common state sponsor.

Table 1 summarizes our hypotheses and suggests their observable implications for the composition of alliance networks at the level of tactical joint operations.

Network Analysis of Syrian Militant Alliances

We employ social network analysis to test our four theoretical propositions. A social network consists of nodes and the ties between node dyads. The nodes can represent

Table 1. Hypotheses, Causal Mechanisms, and Expected Network Structure.

Hypotheses	Causal Mechanisms	Expected Network Outcomes
Hypothesis 1: Ideological alliances	*Ideological homophily* shapes cooperation due to similar understanding of enemies and allies (conflict framing), ideas and institutions of sociopolitical order (ideal polity), and the boundaries of that order (territorial aspiration)	Network structure will be shaped by groups' shared ideological attributes
Hypothesis 2: Symmetric alliances	*Power aggregation* is the primary consideration behind cooperation	Network structure will be shaped by groups' comparable power
Hypothesis 3: Asymmetric alliances	*Security-autonomy trade-off* is the primary consideration behind cooperation	Network structure will be shaped by groups' disparate power
Hypothesis 4: State sponsored alliances	*Sharing state sponsors* compels rebels to forge cohesive alliances	Network structure will be shaped by groups' shared state sponsors

individuals, organizations, or states and ties can correspond to relationships such as communication, cooperation, and conflict. Social network analysis can account for the interdependence of relationships within a set of political actors (Ward, Stovel, and Sacks 2011; Hafner-Burton, Kahler, and Montgomery 2009). Alliance models that assume independence of observations in dyads miss out on relational data because alliances are not created in a vacuum; they are dependent upon relationships with multiple groups (Dorussen, Gartzke, and Westerwinter 2016).

The fragmented nature of civil conflicts implies network analysis should be a fruitful methodology for addressing militant behaviors such as alliance formation and infighting (Zech and Gabbay 2016). We illustrate the utility of the network approach in our analysis of rebel alliances in the Syrian civil war.

Rebel Factions in the Syrian Civil War

In March 2011, Arab Spring protest waves reached Syria after making their way from North Africa to the Middle East. Bashar al-Assad's regime initially sought to quell protests and prevent their diffusion through a mix of repression and concessions. However, these measures failed as protests gained momentum across Syria's major cities, and the protestors' demands shifted from reforms to regime change. As the conflict became militarized, the Free Syrian Army (FSA) formed from the ranks of defecting officers and its affiliated brigades began engaging in conventional armed attacks against regime forces. The FSA exemplified the secular nationalist tendency, framing the Syrian rebellion as a

national and democratic revolution that encompasses Syria's diverse ethnic and religious communities.

The inability of protesters and the FSA to topple the Assad regime in the opening months of the insurgency gave rise to rival armed factions, the most notable of which was the Al-Qaeda affiliated Al-Nusrah Front (ANF). Formed in January 2012, ANF was avowedly sectarian and jihadist, casting the conflict not as a revolution, but rather as a holy war against a secular regime dominated by heretical Alawites (an offshoot sect of Shiism). It called for the formation of an Islamic state strictly adherent to religious law (International Crisis Group 2012; Lister 2015).

Many other Islamist factions emerged, ranging from Muslim Brotherhood sympathizers such as Al-Tawhid Brigade to Salafists such as Ahrar al-Sham Islamic Movement (ASIM). The latter became one of the dominant factions in the insurgency, competing with both the FSA and ANF (International Crisis Group 2012). ASIM represented Salafist nationalists that wanted to establish an Islamic state within the boundaries of Syria's national territory, but, unlike ANF, it did not frame the conflict in sectarian terms.

Kurdish communities established their own armed groups, notably the People's Protection Units (Yekîneyên Parastina Gel, YPG), to defend their territories from regime forces as well as hostile rebels (International Crisis Group 2014). The YPG is secular in orientation and views Kurdish co-ethnics as its primary in-group for whom it seeks autonomy within, or secession from, the Syrian state.

In 2013, the Islamic State in Iraq and the Levant (ISIL), led by Abu Bakr al-Baghdadi, splintered the ranks of ANF to form an even more extreme sectarian jihadist faction. ISIL further aggravated the conflict by intensifying sectarian polarization, expanding the conflict into neighboring states, and threatening international security through global terrorism. ISIL also produced fratricidal violence within the rebel movement as it sought to expel rivals from its strongholds and asserted itself as the sole legitimate rebel organization that merits allegiance (Lister 2015).

Cooperative Rebel Network: Data and Variables

We measure rebel cooperation (our dependent variable) in terms of claims of tactical joint operations. The use of joint operations provides a more demanding test of ideological homophily than formal alliances because if groups prefer to cooperate with ideologically similar rebels at the tactical level, then they should be even more selective for the deeper, leadership-level collaboration required in strategic coalitions.

We began our data collection by tracking the operational claims of forty-four major rebel groups using Arabic and English newspapers of record, US government informational briefs, and think tank reports. Since it was not possible to collect data on all the Syrian rebel groups, we limited our analysis to a medium N that had sufficient credible information to ensure data reliability. Although not ideal, expanding the analysis to less prominent groups risked sacrificing quality for quantity.

Furthermore, by focusing on the primary rebel actors, we assumed as Krause (2017, 14) does that prominent players matter the most and that minor players are less likely to shape conflict trajectories.

We used automated text processing to find claims that contained "joint," "collaboration," "cooperation," or "support" and then hand coded each claim to verify it constituted a joint operation. We collected their claims of attacks—including both targets of attack and groups involved in joint operations. These data come from US Government translations of insurgents' statements and operational claims, drawn from social media (Facebook, Twitter, and YouTube) as well as various jihadist forums.

We used any claims of joint operations from the 44 organizations to one another or to smaller groups to generate a network of some 220 Sunni Arab and Kurdish groups actively engaged in the conflict. This resulted in 696 joint operations and more than 930 ties between the 220 groups across the four years of the conflict spanned by our data (July 2012 to June 2015). The joint operations network is a symmetric matrix whose elements are the total number of joint operations claimed by either group in the dyad represented. If more than two groups were claimed to be involved in an attack, we gave each group a tie with each other group mentioned.

Network Description

The full network (Figure 1) shows some clear patterns of cooperation. The more prominent groups, such as ASIM, ANF, ISIL, and Al-Sham Legion (ASL), have separate retinues of small groups linked only to them. However, there is also cooperation among prominent groups. ASIM, the group with the most ties, cooperates with large FSA-affiliated groups such as the Ahfad al-Rasul Brigades (AARB) and the Al-Furqan Battalions (AFB) as well as the sectarian jihadists ANF and ISIL. There are Kurdish groups in our data, observed in the lower left corner and linked to the Sunni Arab militants by a single connection—YPG to Ar-Raqqa Revolutionaries Brigade (ARRB).

Measuring Ideology, Power, and State Sponsorship in the Network

We evaluated rebel groups for three ideological areas of relevance to the Syrian conflict. Sectarianism serves as our conflict frame variable: groups with high sectarianism scores cast the conflict as Sunnis versus Shiites/Alawites, whereas groups with low sectarianism scores have little or no anti-Shiite rhetoric. Salafism, which measures the extent to which groups ascribe to that puritanical strain of Sunni Islam, provides our ideal polity variable. The use of Salafism better resolves differences within various stripes of Islamists than a simple secularism versus Islamism scale. Revisionism is used for the territorial aspiration component of ideology: groups with low scores seek to preserve Syria's territorial integrity, whereas a high score
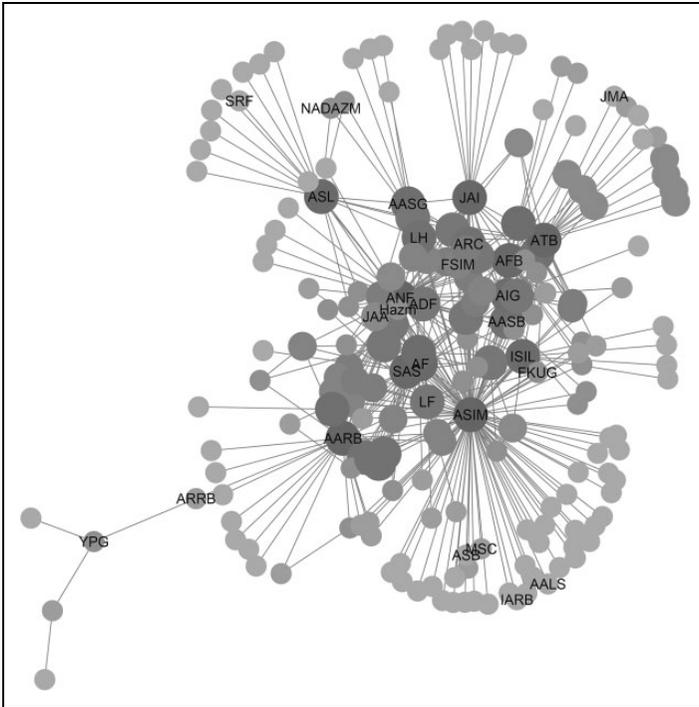
Figure 1. Network of Syrian militant joint operations. Links indicate presence of one or more ties between groups. Circle size is proportional to node degree. The names of smaller groups have been removed from this graph to make it readable.

signifies a desire to abrogate it, in particular as do Caliphate-minded sectarian jihadists or Kurdish separatists.

Each axis of ideology is coded on a scale of 1 to 5, a range that allows us to capture the proximity or distance of groups on each component. We hand coded the ideology of the forty-four Syrian rebel groups using manual coding from the groups' founding charters and other public declarations (see Supplemental Material for coding methodology and the rebel groups' ideological scores). We aggregate the scores of the three components of ideology into one average ideology score and check those results to make sure the variable we have constructed makes sense in light of Syria's factional divides (see Supplemental Material).

Our methodology situates groups in ways that make sense in the context of the Syrian civil war. We would expect groups in Syria to broadly fall into the following categories: *Secular nationalists*, *Salafist nationalists*, *secular Kurdish separatists*, *and sectarian jihadists* (see Table 2).[8]

Table 2. Ideological Spectrum of Syria's Militant Factions.

Dimensions of Ideology	Secular Nationalist	Kurdish Separatist	Salafist Nationalist	Sectarian Jihadist
Conflict frame	Syrians versus the Assad regime	Kurds vs. sectarian jihadists	Sunni Syrians vs. the Assad regime	Sunnis vs. Alawites/Shiites
Ideal polity	Secular democratic Syria	Kurdish secular government	Islamic state	Islamic state
Territorial aspiration	Unified Syria	Separate republic or autonomy	Unified Syria	Transnational Islamic caliphate

We measure power in the network by group size. For each group, we collected as many estimates of size as were available (see Supplemental Material). We created a low–medium–high estimate for each group, when possible, and used the medium estimate in our analysis. As we could not locate size estimates for a few small groups, they were assigned a minimal value of 500 fighters.

Although group size is by no means a comprehensive measure of power, it is often used as such in statistical analysis (Akcinaroglu 2012; Christia 2012; Krause 2013/2014). We make the assumption that groups that can mobilize more fighters than their competitors are also likely to have substantial financial resources to arm those fighters, pay them salaries, and support their families. Thus, we proceed with group size as a proxy for other elements of rebel power. We also use the Institute for the Study of War (ISW) "powerbrokers" measure to validate this variable and find that no group coded as a regional powerbroker by ISW is also a "small" rebel group in terms of number of fighters (Cafarella and Casagrande 2016). The smallest group in our data listed as a powerbroker is Nur al-Din al-Zinki Movement with a size estimate of approximately 5,000 fighters.

Lastly, we assess the presence or absence of shared state sponsorship by drawing upon informed secondary sources that identify the primary sponsors of rebel groups (see Supplemental Material for the complete list of sources). As for rebel group location, we used the operational claims of rebels to determine their primary areas of operation. Some groups operated locally, and were coded as such, while others had multiple branches. Groups that appeared in four or more governorates were coded as national, even though they may not have had presence in every Syrian region.

The Core Network

We coded covariate data for forty-four rebel groups and tracked the collaborative relationships among them. Only thirty-one of those forty-four groups participated in collaborative tactical relationships, so we proceed with 376 ties among these thirty-one groups (see Figure 2).
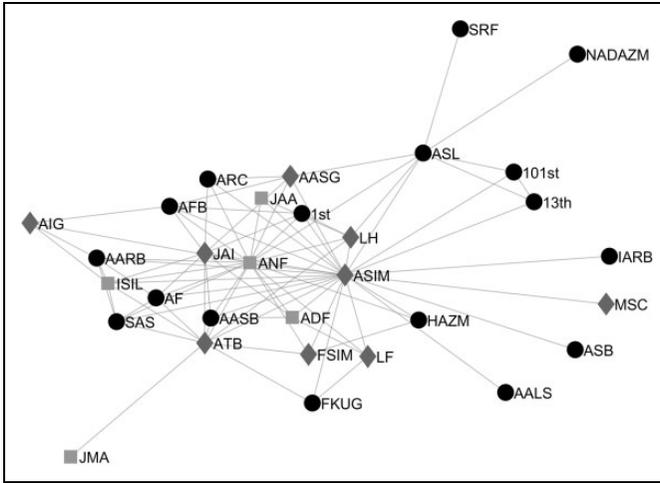
Figure 2. Diagram of the thirty-one core groups with collaborative ties within the network. A line between two groups indicates the presence of at least one joint operation between them. Node shapes denote secular nationalist (circles), Salafist nationalist (diamonds), and sectarian jihadist (squares) ideological classifications.

The Supplemental Material provides data on the core groups used in this analysis, as well as descriptive statistics. The core groups display significant variation in terms of group size, ideology, and state sponsorship.

Network Regression Analysis

To evaluate our hypotheses relative to one another and while controlling for additional variables, we run an AME regression models from Minhas, Hoff, and Ward (Forthcoming). The AME regression is an extension of the class of network inference methods known as latent space models, which seek to relate the tendency of nodes to form ties with each other to their proximity in an underlying space of latent variables (Cranmer et al. 2017). Rather than assuming independence of observations (as per de Finetti's theorem, which justifies the conditionally independent and identically distributed assumption in statistics), these models account for dependence between dyads (row and column means—additive effects) and higher-order dependence in the network structure such as stochastic equivalence (multiplicative effects—see Supplemental Material for model specifications and details; also see Hoff 2015). AME models have been used recently to analyze conflict and international relations data (see Dorff 2015; Dorff, Gallop, and Minhas Forthcoming; Minhas, Hoff, and Ward 2016).

Table 3 presents the AME regression results for difference in average ideology, difference in power, and shared state sponsorship separately (models 1–3) and

Table 3. Square Root Transformed Dependent Variable.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	.07 (.11)	.75 (.00)	−.00 (.00)	−.48 (.28)	−.41 (.32)
State sponsorship (node)				.07 (.11)	.09 (.12)
Ave. ideology (node)				.07 (.04)	.07 (.04)
Power (node)				.01 (.01)	.00 (.01)
ASIM (node)					.32 (.28)
Ideol. diff. (dyad)	−.04*** (.01)			−.05*** (.00)	−.05*** (.01)
Power diff. (dyad)		−.06* (.04)		−.01*** (.00)	−.01*** (.00)
Shared St. sponsor (dyad)			.06 (.05)	−.00 (.05)	−.10 (.05)
Shared location (dyad)				.17*** (.04)	.17*** (.04)

Note: Results of additive and multiplicative effects regression analysis. Dependent variable is square root of the count of collaborative ties. Standard errors are given in parenthesis.
*p < .05.
**p < .01.
***p < .001.

together with controls for their node-level values (for state sponsorship, a dummy variable corresponding to the presence or absence of a sponsor) and shared location (model 4), and a control for our most prominent group, ASIM (model 5). As the AME software does not yet cover Poisson or Negative Binomial Distributions, we follow standard practice for such cases and take the square root of the dependent variable to account for the progressively increasing residuals in our data as independent variable values increase. Results using the direct count value of the dependent variable and an ordinal model are displayed in Supplemental Material.

Table 3 reveals strong support for the ideological alliances hypothesis (Hypothesis 1): groups that are ideologically proximate cooperate with each other more so than the ones that are ideologically distant. The decrease in cooperation with increasing ideological difference is statistically significant regardless of the inclusion of other covariates and whether the square root transformation or raw counts is used.

We find some support for power symmetry (Hypothesis 2): groups of similar strength tend to cooperate with each other more so than those that vary in their power capabilities. This finding, however, is inconsistent. It is always significant in the square root transformation but, in the direct tie count, only becomes significant for model 4 (see Supplemental Material). The support for power symmetry rules out the opposite prediction of power asymmetry (Hypothesis 3).

Ideology has a consistent, statistically significant value across models with a smaller degree of uncertainty than for the power difference (see Supplemental Material) and with a larger effect size than power in the majority of models. Also, the robustness checks below firmly support the ideological homophily hypothesis, but not power symmetry or asymmetry.

We do not find evidence in favor of the state-sponsored alliances hypothesis (Hypothesis 4), which predicts that rebel dyads with shared sponsors should exhibit greater cooperation than dyads with distinct external sponsors. Perhaps this result is an artifact of the lack of weight in shared sponsorship; our data represent whether two groups were ever sponsored by the same state, with no weight given to how important a sponsor was for a particular group. More substantively, however, two plausible explanations may shed light on this finding. First, as long as rebel groups were generally cooperating with ideologically similar groups, which is what we find in the Syrian civil war, their state sponsors may not have cared if their clients were working with rebels that have different sponsors. However, had it been the case that Syrian groups were, generally speaking, cooperating with ideologically dissimilar factions, their state sponsors would have exerted pressure to break those cooperative ties.

A second possible explanation is that tactical cooperation in the form of joint operations is less visible to state sponsors than strategic mergers or formal coalitions. States may have overlooked their clients' tactical cooperation partners in the Syrian theater to achieve the broader objective of regime change. It is more likely that overlapping external sponsorship plays a greater role in facilitating or hindering strategic alliances that are much more formal and public than they do tactical cooperation. Therefore, our finding regarding state sponsorship at the tactical cooperation level does not preclude the importance of this variable in strategic alliances, which we do not explore in this study.[9]

Table 3 includes shared location as a control since it is possible that observed cooperation between ideologically similar groups is merely a surface manifestation of the underlying ideological homogeneity of groups who operate in the same area. Tactical joint operations, perforce, require rebels to operate in the same location, and if these operating areas consisted only of groups with similar ideologies, then ideological homophily would arise simply due to geographic proximity. One might argue that the homogeneity of a given geographic area with respect to its ethnic or religious composition would foster such ideological homogeneity. Alternatively, one might expect that social influence between proximate groups would result in ideological convergence. This argument, however, begs the question as to the epiphenomenal nature of ideology by assuming that it is easily malleable in the first place. In counterpoint, contact between ideologically distinct groups may readily result in their violent conflict rather than ideological convergence, an outcome amply demonstrated in the Syrian conflict.

Empirically, Table 3 supports shared location as being important to tactical collaboration as intuitively expected, but ideological homophily still remains significant. The above supposition that geographic proximity imposes ideological uniformity is at odds with the fact that the predominantly Sunni Arab composition of the rebel movement reflected ideological diversity—a diversity that existed in close geographic proximity. In Aleppo, for example, there were no less than twenty-two

separate armed groups representing three distinct ideological strands: secular nationalism, Salafist nationalism, and sectarian jihadism. Similarly, in Idlib, there were sixteen groups representing these three distinct ideologies. In fact, nine of the ten Syrian governorates in our study had at least two ideologically divergent groups (see Supplemental Material).

Robustness Checks: Assortativity and Network Simulation

Two additional network methods are employed as robustness tests for ideology and power in the above analysis: (1) comparing the assortativity, a metric of network homophily or heterophily, of the observed network with the distribution obtained from a null model simulation and (2) a simulation with homophily included to estimate the characteristic ideological or power scale over which cooperation is more likely (a heterophily simulation is used if power asymmetry is indicated). These two methods consider the three ideological components, average ideology, and power—all treated separately.

Assortativity is the standard metric for assessing whether tie formation is driven by similarity or dissimilarity with respect to a scalar variable (as we operationalize power and ideology). The assortativity α is the correlation of the variable values for the nodes at each end of a tie taken over all ties (see Network Simulation Appendix in the Supplemental Material). An α value of $+1$ signifies maximal homophily whereas -1 represents maximal heterophily. For statistical testing purposes, the assortativity cannot be treated as one would treat a standard correlation because ties are not taken to be independent.

We developed a simple simulation of the tie formation process that can be implemented using our empirical data. When ideology (or power) is not included, the simulation acts as a null model that can generate a distribution of assortativity values for calculating the statistical significance of the observed assortativity. Our simulation-based tests will decide that homophily (heterophily) is present when the difference between the empirical network assortativity and the mean of the null simulation over many runs is positive (negative) and statistically significant.

In the simulation, nodes form ties (i.e., groups conduct joint operations) probabilistically. Each iteration consists of the placement of a tie between nodes where the iterations proceed up to the total number of ties in the observed network. The simulation is constrained in that it seeks to reproduce the node degrees in the observed network. Each node can only receive a maximum number of ties equal to its observed degree (its number of joint operations).[10] The model essentially assumes that a group wishes to make its units available for a certain number of joint operations over a given time period. The more units available at a given moment, the more likely a group is to find a partner, which, at the dyad level, implies that the interaction probability between a pair of groups depends on the product of their available units.

Table 4. Robustness Analysis Results.

Variable	Assortativity				Simulation	
	α	α_{null}	σ_{null}	p	l/l_S	CI
2012–2015 ($N = 376$)						
Conflict frame	−.032(+)***	−.196	.039	<.0001	2.3	[2.0, 2.7]
Ideal polity	−.096(+)	−.097	.047	.97	––	––
Territorial aspiration	−.027(+)***	−.238	.042	<.0001	2.3	[2.0, 2.8]
Average ideology	.017(+)***	−.145	.042	<.0001	2.3	[1.7, 3.6]
Power	−.235(−)	−.172	.048	.19	––	––
2012 ($N = 55$)						
Average ideology	−.138 (−)	−.134	.108	.96	3.1	[1.9, 5.4]
Power	−.574 (−)	−.382	.110	.07	5,900 (l_S)	[2,500, 10,000]
2013 ($N = 136$)						
Average ideology	.096 (+)**	−.122	.072	.003	1.8	[1.5, 2.2]
Power	−.31 (−)*	−.152	.078	.04	6,300 (l_S)	[3,000, 11,000]
2014 ($N = 119$)						
Average ideology	.025 (+)***	−.230	.075	.0006	––	––
Power	−.236 (−)	−.176	.081	.47	––	––
2015 ($N = 66$)						
Average ideology	−.313 (−)	−.242	.104	.51	––	––
Power	−.141 (+)	−.146	.107	.94	8,900	[6,800, 14,000]

Note: N is the number of ties. For assortativity, α is the assortativity of the observed network where $+$ $(−)$ indicates α greater (less) than α_{null} corresponding to homophily (heterophily); α_{null} and σ_{null} are, respectively, the mean and standard deviation of the assortativity in the null simulation taken over 10,000 runs; the p value is the (two-tailed) fraction of runs exceeding $|\alpha - \alpha_{null}|$. For Simulation, l is the mean interaction length (suppression length l_S where indicated) and CI is the 95 percent confidence interval (blank entries signify the absence of a clear minimum); 1,000 runs at each point were used to generate 1,000 resamples of size 50 with replacement and then the minimum l (or l_S) for each resample was found.
*p < .05.
**p < .01.
***p < .001.

There are three variants of the simulation (see Network Simulation Appendix in the Supplemental Material): (1) a null simulation in which, as described above, only the node degrees affect tie formation, not the node variables, (2) a homophily simulation in which the probability of tie formation between two nodes decreases as the distance between their variable (ideology or power) values gets larger, and (3) a heterophily simulation in which the probability of tie formation increases with increasing distance between them. For the homophily simulation, a parameter called the interaction length, l, sets the characteristic length scale so that, roughly speaking, nodes are significantly more likely to form ties within that length from each other than beyond that range. As the interaction length scale increases, the effect of homophily diminishes until the null model is effectively recovered. The heterophily simulation uses a different parameter, the suppression length ls, for which the

probability of interaction is reduced for the region within the suppression length and much greater in the region outside it.

Robustness Findings

The statistical tests using assortativity are shown in Table 4 for the entire 2012 to 2015 period and by individual years (note that 2012 and 2015 are not full years of data). For the entire period, the observed assortativity values for ideology are all greater than the mean of the null distribution indicating homophily. Conflict frame and territorial aspiration are highly significant. Although ideal polity is not significant, the mean of all three components, average ideology, remains highly significant. Accordingly, the assortativity tests support the ideological homophily hypothesis (Hypothesis 1); ideological clustering characterizes the network structure.[11] The results of the simulation, which models interactions driven by ideological homophily, are similar in that conflict frame, territorial aspiration, and average ideology all display well-defined values of the interaction length l whose confidence intervals are less than the full range of the ideology scale, whereas ideal polity does not. The common value of $l = 2.3$ indicates that the zone in which cooperation is relatively likely is about half the length of the full ideology scale. Thus, groups in the middle of the spectrum can cooperate with both ends, but cooperation between the opposed extremes of the scale will be much less common.

For the network by year, the assortativity for average ideology is highly significant for 2013 and 2014, the two years with the greatest number of ties. The 2012 and 2015 networks, which are smaller, show no significance.

The substantive effect of ideological homophily can be assessed by running the homophily simulation with the estimated interaction length from Table 4 and examining how the number of ties for a dyad depends upon their ideological separation. For example, the interaction length for average ideology in the 2012 to 2015 network is 2.3. To enable a more generic assessment not contingent upon the specific Syria configuration, we simulated a network with a uniform degree distribution and uniform ideology distribution and found that increasing the distance between two nodes initially collocated at the middle of the ideology range to successive distances of (1, 2, 3, 4) units decreased the probability of tie formation between them by (5.4, 20.5, 39.2, 56.6) percent relative to the probability at zero distance (see Supplemental Material). Although the probability of tie formation depends nonlinearly on the ideological distance, averaging the above changes yields a 14.15 percent drop in probability per unit of distance. This value is consistent with the 13.4 percent decrease per one unit shift in ideological difference found by taking the β value from AME model 5 and running a simple linear prediction function while varying the values of ideological difference.

Turning to power, the observed assortativity for the full period is less than the mean of the null simulation, indicating a tendency toward heterophily, but is not significant. Given this tendency, the heterophily simulation was performed, but no

well-defined suppression length was found. The assortativity tests for the first three individual years also indicate a heterophily tendency, but which only rises to significance for 2013. On balance, the assortativity tests do not support either power symmetry or asymmetry.

When comparing the findings of the AME and robustness analyses, both show statistically significant results for ideological homophily, thus providing comprehensive support for ideology as an important factor in determining rebel collaboration. However, the two analyses differ over power. The AME analysis indicates statistically significant power symmetry while the assortativity analysis points toward power asymmetry, albeit not significant. The reason for this disparity may arise from a nonlinear relationship between tie formation and group power differentials. Considering the difference between the observed number of ties in a dyad and that expected based solely from the group degrees (Equation 1 in the Supplemental Material), the distribution of this quantity as calculated from the network (no simulation involved) shows an inverted U-shape as a function of power difference rather than a monotonic decrease (increase) as would be fully consistent with a power symmetry (asymmetry) dynamic (see Supplemental Material): the observed-expected ties difference is negative at both low (<5,000) and high (>20,000) power differences and positive for intermediate ones. The tie suppression at low power difference is consistent with power asymmetry whereas that at high power difference is consistent with power symmetry. In contrast, a similar plot for ideology shows a greater than expected number of ties for low ideology differences (<2) and smaller than expected for higher ideology differences and so is clearly consistent with an overall homophily effect.

Finally, we address the concern that the finding of ideological cooperation may be an artifact of our limited sample of only forty-four groups of hundreds in the Syrian conflict. As the set of omitted groups is almost entirely, if not completely, composed of relatively weak groups, this concern amounts to the possibility that the weaker groups in our sample are unrepresentative of the broader universe of weak groups in Syria. Since the strong groups are ultimately of greatest importance, we test for ideological homophily between them. Indeed, considering the network of joint operations between groups of size at least 5,000 over the full time period, the assortativity test finds homophily for average ideology to be significant ($p < .0001$). Therefore, ideological similarity helps drive cooperation between the groups whose behavior is most consequential to the conflict. Additionally, a t test reveals no significant difference between the average ideology means of the strong and weak (<5,000) groups in our sample, so there is no basis to believe that our sample of weak groups is unrepresentative.

Discussion and Conclusion

Rebel cooperation is a common occurrence in civil conflicts. In this study, we wanted to know with whom rebels cooperate in the context of fragmented conflicts

that feature a diversity of ideological actors, variation in group-level power capabilities, and a plethora of state sponsors. Theoretically, we proposed three components of militant ideology and argued how each can facilitate cooperation. Conflict framing promotes shared understandings about in-groups and out-groups, thereby easing potential dissension about permissible allies and targets. A similar conception of the ideal polity encourages groups to work cooperatively toward achieving compatible visions of the postconflict political order. Territorial aspiration impacts fundamental questions such as whether or not rebels seek to break up the national state or maintain its integrity, which are incompatible goals that dampen cooperation. We employed an innovative network-analytic methodology, constructing a militant tactical cooperation network from claims of joint operations and relating its structure to ideology, power, and state sponsorship in the Syrian civil war.

Substantively, our central finding is that ideology is an important determinant of alliance composition in the Syrian civil war. Groups that were ideologically similar cooperated more frequently than those who were ideologically dissimilar: according to our models, a one unit increase in ideological distance corresponds to about a 14 percent decrease in the likelihood of rebel tactical cooperation. Syrian groups in the middle of the ideological spectrum were willing to cooperate with groups at the end of the spectrum, but groups at the end of the ideological spectrum were less willing to cooperate with each other. No clear finding concerning power emerged as one analysis supported power symmetry while the other supported neither symmetry or asymmetry. We found no evidence that having a common state sponsor encouraged cooperation.

Our ideology hypothesis and results may elicit an endogeneity objection. It could be asserted that stable interrebel relationships motivated by power form first and then groups adjust their ideologies accordingly. In this scenario, power drives the ideological preferences exhibited in alliance composition. This challenge assumes that militant groups arise as ideological blank slates, contrary to the fact that the founders of such groups often have strong ideological orientations. Many of the individuals who formed Syria's major Islamist rebel groups were actually in jail at the start of the revolution due to their prior Islamist activism and then subsequently released (Lister 2015, 53-55; Baczko, Dorronsoro, and Quesnay 2018, 184).[12] In addition, ideological charters, an important element of our coding, are typically issued by groups shortly after their formation. Their ideological statements, therefore, are biased toward a time before these groups have formed cooperative ties with other rebels, and so evidence of homophily in the network reflects selection of similar others.

Another endogeneity concern is that we treat ideologies as fixed, but conflict processes are likely to change the ideological preferences of rebel factions over time. We treat the question of ideological change as an empirical one and our operationalization of ideology using the three components can help track that change. We suspect that ideologies change over time but do so gradually. A common process in social networks is increasing homogeneity in network ties because of the selection of similar partners and the reinforcing effect of social influence of those partners in

maintaining that similarity. Ideological shifts, therefore, will typically be limited and evolutionary, a process that allows for stable patterns to emerge between ideology and cooperative network structure. This view of incremental ideological change is supported by our findings of ideological homophily for the full 2012 to 2015 network and individually for 2013 and 2014 using ideology scores biased toward earlier times in group histories.

Another concern relates to the interaction between power balancing and ideological considerations. These broad concepts are not alternative and incompatible explanations of alliance composition. Rebels may form balanced coalitions, each of which consists of ideologically similar groups. As rebels face a greater (lesser) threat from the state, they may become less (more) ideologically selective about their allies. However, ideology may also act as a barrier to alliance formation even when the distribution of power is so adverse that it would seem to demand rebel unification. In Syria, the tide turned dramatically against the rebels after Russia's direct military involvement on the side of the regime in late 2015 and after the fall of Aleppo in late 2016. Yet the rebels did not ally across ideological lines but remained bitterly divided (Collins 2017; Perry and Al-Khalidi 2017).

Our empirical analysis of a single case study limits our ability to generalize beyond the Syrian conflict. Although not entirely unique, the Syrian civil war is characterized by severe levels of movement fragmentation, a wide spectrum of ideologies, and a perplexing array of external interventions by state and substate actors. Therefore, it may not be entirely representative of other civil wars where rebel groups are fewer in number, nonideological identities prevail (such as in ethnic or resource-based conflicts), or where international interference is limited in scope. Our findings regarding the robustness of ideological homophily in Syrian militant alliances should be thoroughly investigated in other conflicts to have confidence in its generalizability. Our Syrian study, however, highlights the need to consider seriously the role of ideology in rebel alliances and offers a template for researching civil conflicts that exhibit similar patterns of intense fragmentation, ideological polarization, and tactical alliances such as those ongoing in Ukraine, Iraq, Afghanistan, Pakistan, Libya, Sudan, and Yemen.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. Ideological diversity emerges for a number of reasons. First, some conflicts are ideological at their core, such as the ones featuring communist and fascists in the twentieth century (e.g., Spanish civil war 1936–1939), or fundamentalists and secularists today. Second, prewar political mobilization based on ideological cleavages can extend into the civil war, shaping dynamics of rebel cohesion (Staniland 2014) and violence between ideological rivals (Balcells 2017). Third, the entry of transnational ideological actors such as al-Qaeda or Hezbollah can create ideological polarization, forcing rebel groups and their communities to take sides based on sharp ideological divides (Bakke 2014).
2. Fearon and Laitin (2000, 857) refer to this process as constructing "antagonistic identities," Asal and Karl Rethemeyer (2008, 438) refer to it as "othering," and Shesterinina (2016, 417) terms it "collective threat framing."
3. Territorial aspirations have been at the root of many secessionist civil conflicts, resulting in 131 sovereign states coming into existence since 1945, "a threefold increase in 70 years" (Griffiths 2016, 1).
4. Between states, Morrow (1991, 921-23) argues that capability aggregation drives symmetric alliances.
5. This assumption is supported by Lichbach's (1995, 19) observation that in rebel coalitions, the largest and richest organizations tend to pay a disproportionate cost for maintaining an alliance.
6. In international relations, Morrow (1991, 921-23) finds alliances are more frequent between powerful and weak states than between those of comparable power.
7. According to Jones (2017, 136), of 181 insurgencies between 1946 and 2015, 82 percent involved outside support.
8. For similar categorization of rebel factions, see Cafarella and Casagrande (2016, 9) and Phillips (2016, 131-34).
9. Additional model specifications, including bivariate relationships and additive and multiplicative effects diagnostic plots, are available in the Supplemental Material.
10. It is not always possible to reproduce the degrees exactly, but the differences are typically small.
11. A network visualization showing how groups cluster by ideology is included in the Supplemental Material.

12. Ahrar al-Sham Islamic Movement and Jaysh al-Islam are two such groups. It is likely that the Assad regime released these leaders in a cynical ploy to affirm its narrative that the opposition consisted of jihadist terrorists, a strategy that implies that the regime, at least, believed that these men would act on their ideological predilections. Moreover, veterans of earlier jihads formed two other prominent factions, Al-Nusrah Front and the Islamic State, which suggests deep ideological commitments over time.

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