Organizing for Resistance: How Group Structure Impacts the Character of Violence

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Organizing for Resistance: How Group Structure Impacts the Character of Violence

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How does the way in which a group organizes change the lethality of the group’s attacks? In this article, we argue that groups organized vertically as hierarchies are likely to conduct more lethal attacks. We build our argument around three advantages inherent to centralized structures: functional differentiation, clear command and control structures, and accountability. We argue that each of these characteristics positively impacts an organization’s ability to deliver an effective lethal blow. To test our argument, we use a mixed method approach, drawing on empirical evidence and support from a time-series case study. Our large-N analysis examines the trends in more than 19,000 attacks. In this test we develop a novel proxy measure for hierarchy based on a group’s bases of operation and non-violent activities. To complement the empirical work, we examine the history of Euskadi Ta Askatasuna (ETA), the Basque separatist group. Over several decades of violent operations, this...
group’s structure has changed dramatically. We analyze how these shifts impacted ETA’s ability to maximize the effectiveness and damage of their attacks. In both the case study and large-N analysis, the more hierarchically organized the group, the more easily the group can orchestrate lethal attacks.

Keywords accountability, command and control, Euskadi Ta Askatasuna, functional differentiation, group structure, lethality, relational contracting

Introduction

Between the beginning of the al-Aqsa intifada in September 2000 and March 22, 2004, the Israeli Ministry of Foreign Affairs reports that Hamas was responsible for a lethal wave of approximately 425 attacks against Israeli citizens and their interests, resulting in nearly 2500 injured or killed.1 It is remarkable that a single organization had the organizational capacity to perpetrate such a concerted, sustained wave of attacks. Indeed, over the course of the four years, attacks occurred nearly every four days and, on average, harmed more than five individuals each time. This is contrasted with the more grassroots Swords of Truth, a militant, religious Palestinian group that detonated bombs at nightclubs that caused damage, but no injuries.2

How does a violent non-state group like Hamas coordinate to achieve these types of ends? More specifically, what factors make it possible for a group such as Hamas to carry out such damaging campaigns? Is it simply the nature of the conflict, or are there characteristics of organizations that predict a group’s potential effectiveness? We argue that organization matters for the character of violence. Although the conventional wisdom is that networked terrorist organizations are on the rise and have advantages in flexibility, we see a tradeoff between networked and hierarchical organizational forms. We look to centralization and specialization as necessary, but not sufficient, organizational prerequisites for the ability to achieve large-scale, sustained violence.

In this article, we examine how the organizational structure of politically-motivated violent non-state actors, namely terrorist groups, affects the character of their violence. While violence can be quantified along a number of dimensions, we focus on the human toll (here defined as both injuries and deaths caused by an attack, and hereafter referred to as lethality) as an outcome.3

With the emergence of unique organizational forms, most specifically networked terrorist organizations, a recent spate of literature has developed to describe the relative advantages of different structures. Complementing earlier works on group structure in other areas,4 this literature and our argument suggest groups face a tradeoff between operational advantages, where flatter networked organizations fare much better, and effectiveness, on the other. Prominent works have shown networked terrorist organizations' operational advantages include autonomy, flexibility, and longevity.5 Our analysis describes benefits inherent to hierarchy, the alternative organizational form. In doing so we add depth to the discussion and show how hierarchy positively affects a group’s level of violent output.

This research adds to a growing line of inquiry about the character of violent conflicts involving non-state actors. Most prominently, scholars have examined the tactical profiles and substitution patterns of terrorists, as well as variation in the lethality of civil wars.6 Our theory brings literature on organizational structure into this debate, something that, to date, has been absent in considerations of the character of violence.
We offer a group-level explanation, distinguishing between groups based on Lake’s definition of hierarchy: “when one unit . . . possesses authority over another.”7 Within the universe of terrorist organizations, these groups are centralized organizations with clear lines of command and control. Hierarchical organizations often most closely resemble states or militaries with clear lines of authority. From this, we argue that hierarchical structure creates three distinct, but related, advantages in the execution of attacks: (a) clear lines of command and control that coordinate the efforts of various parts of an organization; (b) accountability between functioning units and central control; and (c) specialization within units. Hierarchy means each specialized unit is more effective at its specific task(s) than unspecialized non-hierarchical units; there is a clear center that manages the activities of the group as a whole, holding subordinate units to account. In the case of violent groups, we claim that these characteristics have specific implications for the character of violence: attacks by hierarchies are more lethal than those perpetrated by their non-hierarchical counterparts. Similar to Eilstrup-Sangiovanni and Jones,8 we focus the discussion on violent groups by downplaying the strengths of non-hierarchical (also referred to as flat or networked) organizations in favor of those that can centrally coordinate tasks in violent campaigns. Despite policy pronouncements to the contrary, we show that non-state actors that organize themselves hierarchically are more effective in their use of violence.

The paper proceeds as follows. First, we evaluate the explanatory power of existing theories to demonstrate how they apply in our analysis. Next, we develop our theoretical framework explaining why hierarchical groups are more likely to be more lethal. The third section evaluates our claims through a cross-sectional analysis of groups in conflicts worldwide from 1970 to 2010 and considers the case of the Basque nationalist group, Euskadi Ta Askatasuna (ETA), using our theoretical framework. We conclude by discussing this project’s contributions and extensions to other areas of scholarship involving non-state actors.

**Group Structure and its Effects**

Broadly defined, the organizational structure of violence-producing groups is common as an explanatory variable in the study of intra-state conflict. Recent scholarship in this area has focused on the effect of structure in regularized conflict, looking at its effect on parties’ abilities to negotiate successfully an end to the conflict and to maintain peace after negotiation.9 Others have looked at the ability of groups in conflict to control their own actions while engaged in military activity.10

We build on literature exploring the effect of structure on violence by applying relational contracting theory. Relational contracting views hierarchy as a choice that imposes costs while producing benefits for the actors involved.11 We contend with the booming literature on network theory, which argues implicitly and explicitly that networks, unlike hierarchies, are preferred structures for actors engaged in clandestine or violent activities. Remaining clandestine may be a key structural advantage for a network, but as we argue below, this is not the only advantage groups may consider: hierarchies have a structural advantage in the production of violence.

To begin, we assume that groups use violence in pursuit of political goals. Just as these goals vary, group structures also vary from hierarchical to very decentralized. Decentralized, or networked, groups take the form of political alliances described by Lake.12 These arrangements leave decision-making power to the individual actors, rather than the leader of the group, and are the arrangements that potentially lead
to significant collective action dilemmas. For violent groups that require resources, manpower, and coordination to execute attacks, alliance arrangements could inhibit the ability to complete operations that often rely upon multiple factors for success.13

Presenting an alternative perspective, network theory has gained traction in international relations to explain non-state actors’ effectiveness. Networks are, in many ways, the “Goldilocks” answer to the stasis associated with hierarchy and the coordination problems of spot-market exchanges—they are structured enough to foster collective action, but flexible enough to foster learning and adaptation.14 In essence, what scholars have found to be the winning characteristics of networks over hierarchies are “adaptability, resilience [through redundancy], a capacity for rapid innovation and learning, and wide-scale recruitment...better at exploiting new modes of collaboration and communication.”15 Networks are more efficient than hierarchies in this sense.

Despite the high tide of excitement associated with network analysis and terror, empirical observation belies such enthusiasm. Others have deconstructed the recent history of al-Qaeda, from the 1990s onward, finding that in periods in which the central leadership was missing or had to disperse, the actions of the network were largely futile.16 On the other hand, when the central leadership was able to pursue its policies through routinized mechanisms, such as training camps in Afghanistan and Sudan, the ability for al-Qaeda to execute successful attacks (e.g., Kenyan embassy bombing, U.S.S. Cole, 9/11) increased dramatically.17 This shift toward operational control and security, and tightened principal-agent relationships is indicative of movement toward some of the qualities that make hierarchical organizations particularly effective.18 In a different context, networks may not be effective at transmitting nuclear weapons technology because of the complexity of information.19 Part of the problem may be overuse of the term “network”: it is one thing to find that networks of terrorists working together are more lethal,20 it is another to claim that decentralized “networked” organizations are more lethal.

It is important to clarify that we are not claiming that non-hierarchical groups cannot stage destructive attacks, or that ideology does not matter.21 Instead, we argue that organizational structure affects the character of violence. We look to centralization and specialization as necessary, but not sufficient, organizational prerequisites for the ability to achieve large, sustained violence. Indeed, as we will highlight with the Basque case, hierarchical groups have the ability to scale up their attacks to large, sustained campaigns, or to limit them to damage campaigns; this operational flexibility is what gives them a distinct advantage over networked organizations.

Thus, although networks may help violent and illicit groups stay under the radar of government detection, they also hinder the effectiveness of groups trying to coordinate their activity. Without a central core effectively deciding what to do, the survival of the organization does not necessarily lead to increased success. In the next section, we explain why hierarchies retain a distinct advantage when launching complex operations.

Theory: Group Structure, Effectiveness, and Violent Outcomes

We argue that hierarchies have an advantage in violent output, which explains why groups may deviate from networked forms of organization with their advantages in adaptability and advantages. To isolate this we focus on a single structural distinction: whether the group is hierarchical or not.22 We recognize there is great variation...
in group structure, but reducing the typology of potential group structures is done for analytical clarity, and also to highlight the tradeoff between extreme organizational forms. By identifying those groups organized as hierarchies, we parse out the effects of maintaining a hierarchy versus these other forms.23

Understandably, this is a coarse distinction. In focusing on hierarchy, we under-emphasize two things in our method. First, we do not explain smaller variations in structure within the “not hierarchy” or networks category. Second, we neglect the fact that many groups tend to take on hybrid forms,24 and may vacillate between hierarchy and other organizational forms. However, we believe that understanding extreme forms is the first step to understanding how organizational structure affects the differences in lethality between violent groups.

Given that the groups within the scope of this paper all pursue their ends through violent means, we turn our attention to how likely they are to be “good” at executing attacks. We see three clear advantages of hierarchy over non-hierarchies in effectiveness at the level of the terrorist attack, by which we specifically mean an increase in the lethality of the attack. First, compared to non-hierarchies, hierarchies have centralized command and control capacity. Non-hierarchies may have multiple decision-makers, or none at all, resulting in contested agenda control. Where agenda control is clear, distortion of goals and slippage are less likely—the goals of the center or hierarch are more likely to be clearly communicated to those responsible for conducting them. Second, the lines of accountability in hierarchies are clear. Agents have clear directives from principals. Non-hierarchies may have competing directives, or multiple lines of accountability without clear priorities. Third, hierarchies allow for specialization.25 In the language of relational contracting, vertical integration of organizations (firms) internalizes the risk of defection, allowing for specialization within the organization. This implies that hierarchy is a sufficient, but not necessary condition to create larger attacks.

Because of these three factors, we argue that, first, hierarchical terrorist organizations can be thought of as having higher potential production capacities than non-hierarchical organizations—they are more likely to be able to successfully implement a directive than non-hierarchies. Second, while the hierarchical organization can be thought of as a unitary actor, non-hierarchies are more likely to be characterized by cell-like structures with varying degrees of connectedness. On the whole, non-hierarchies tend to demonstrate a lesser degree of coordination because there are multiple decision-makers that do not necessarily have a unified interest. This is further complicated operationally in creating multiple principal-agent relationships, rather than a single one as we see in hierarchies. In addition, hierarchy leads to higher levels of accountability between the center and those conducting attacks, meaning that the principal-agent relationships will be tighter, leading to greater follow-through of the goals articulated by the center. For instance, others find that al-Qaeda post-9/11 has become a “leaderless jihad,” connected only by a general anti-Western sentiment; each group adopts ad hoc strategies and aims to survive state counter-terror measures.26 The remainder of this section discusses each aspect of hierarchy and its effects on lethality in greater detail.

**Agenda Setting**

Hierarchical organizations have strong agenda-setting capacity: there is a clear point at which the flow of information and the agenda originate, with few (or no) legitimate
alternative sources to distort or challenge the right to articulate the operational goals of the organization. Additionally, the relationship between the agenda-setter and its subordinate units is clear and unidirectional—there are direct and static lines of command and information dissemination in hierarchies.

In non-hierarchies, such as networks, these relationships are reversed; agenda-setting capacity is weak. There is not necessarily a clear point of origin for agenda-setting or a focal point from which information flows. Instead these organizations are characterized by lateral flows of information, with many potentially legitimate voices. As such, command and control mechanisms follow far less routinized paths. This flexibility also makes it possible for multiple actors to act as agenda-setters over the course of a dispute.

Non-hierarchies are more likely to replicate functions, which is one of the characteristics that makes networks more resilient to destruction and an important part of what makes them flexible and long-lived. That is, similar tasks are the domain of multiple actors, making the removal of one part of the organization much less damaging, since others can perform identical tasks. However, having multiple actors order and perform the same functions can lead to ineffectiveness, unclear accountability, and competition over agenda control.

Clear agenda control and a single agenda-setter create tighter relationships between the hierarch and her followers. Given that a group intends for its attacks to be damaging, we expect hierarchies are more likely to be able to execute attacks that are consistent with leaders’ goals. For example, as we discuss in detail below, ETA suffered from the lack of a clear agenda early on, with disorganized attacks, repetitive and feuding factions, and a lack of agreed-upon trajectory for its membership.

**Accountability**

Specialists generally argue that terrorist groups aim to spread fear amongst a population. Conducting lethal attacks is an effective means through which to do just this. However, a group’s ability to execute lethal attacks depends on its ability to punish and reward agents for faithful execution of the agenda. Centralized enforcement is a hallmark of hierarchical organizations of all kinds. In other words, there is a known principal with the ability to identify and punish unfaithful or ineffective agents, minimizing agency loss. Carelessness or negligent actions may lead a principal to punish an agent. Because of this, terrorist attacks by these groups should be better aligned with the goals and directives of the center, leading to more lethal attacks. Irish Republican Army (IRA) leadership created an internal security department in the late 1970s to investigate failed IRA operations for traitors and punish them accordingly. In some cases where IRA operations were carelessly planned and poorly carried out, the units responsible would be dismissed. These types of mechanisms provided an incentive structure based on accountability that enabled IRA leadership to punish traitors and create more professionalized operatives.

Conversely, non-hierarchical organizations are far more decentralized and the opportunities for agents to slack, or less faithfully follow through on leaders’ directives, increase. There are, after all, no clear centralized punishment mechanisms. This opens the door for more deviation and the true preferences of agents to be observed, but the absence of clear, direct punishment and reward mechanisms is an important characteristic of non-hierarchies. For instance, Al-Qaeda is an organization that claims worldwide membership; however, its constituent sub-sections have different
agendas that may or may not coincide perfectly. Al-Qaeda in Iraq has a different agenda from Al-Qaeda in Chechnya. Moreover, various attackers claim ties to Al-Qaeda; many of these claimants may not have actual ties to the Al-Qaeda leadership, but want to be associated with its name and successes. Because followers in non-hierarchies are less faithful and less professional, we expect their attacks on the whole to be less effective and, therefore, less lethal.

**Specialization**

A third advantage of hierarchical organizations is the encouragement of specialization. Specialization within terrorist groups implies that the organization may be capable of generating a variety of goods, in addition to violence. Groups capable of specialization can produce policy through a political wing or party and provide public goods such as health care or education.

Hamas exemplifies this characteristic of hierarchical groups. The group produces violent attacks in addition to providing public goods, such as health care and education, and stands candidates for political office. Another group typically understood as hierarchical, the IRA, embraces similar divergent “products.” The group’s famous “Armalite and Ballot Box Strategy” characterized the IRA devotion to both political and violent strategies. Both these groups demonstrate competence in multiple areas within the context of a singular organization operating with a core leadership.

The specialization allows groups to maximize production. However, specialization can create vulnerability when not integrated into hierarchy. Broadly, this implies hierarchical terrorist organizations will be better able to concentrate efforts into specialized sections, whereby sub-sections focus on the production of one sort of good, such as a political campaign, providing community services, or conducting attacks. This also means that individuals are tasked very specific goals and assigned to the wing of the organization where they have a comparative advantage. While specialists may populate non-hierarchical groups at identical rates, without hierarchy, groups will find it harder to coordinate systematically. Hierarchic organizations are best positioned to identify and foster specialized skills. By allowing for greater and increasing specialization, we predict that hierarchy will increase organizational capacity and effectiveness. This should logically extend across all production frontiers meaning that one of the observable implications with respect to violence is that violent attacks should be more lethal when those responsible are specialists.

Table 1 summarizes the differences discussed in this section.

**Table 1. Differences between hierarchical and non-hierarchical organizations**

<table>
<thead>
<tr>
<th></th>
<th>Hierarchy</th>
<th>Non-hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agenda setting</td>
<td>Single, clear agenda setter. Clear flow of information, few (if any) lateral links</td>
<td>Multiple or no agenda setters. Competing information. Lateral flow of information.</td>
</tr>
<tr>
<td>Accountability</td>
<td>Clear principal and agents</td>
<td>Often unclear or multiple principals.</td>
</tr>
<tr>
<td>Specialization</td>
<td>Each section has its own, defined task</td>
<td>Replication of tasks among sections</td>
</tr>
</tbody>
</table>
For all the reasons highlighted here, we hypothesize that attacks by hierarchies will be more lethal than attacks by non-hierarchies.

Data and Methods

To test our claims, we use a mixed method approach: both a large-N analysis and a case study. The large-N analysis allows us to test the broad applicability of our theories and to examine larger trends amongst different violent groups. The detailed case analysis enables us to identify and verify the causal relationships suggested by the statistical analysis. Additionally, the most significant benefit to our qualitative analysis is that it allows for us to use a more holistic indicator of effectiveness beyond lethality. Our theory is built around lethality, but applies in a broader sense to other types of effectiveness including damage to infrastructure and the economy. Not all violent groups intend to kill or injure people; some groups attack unmanned buildings, while many others target public resources like airports, train stations, or food supplies. Theoretically, we see no reason to constrain the dependent variable to lethality when “damage,” a broader indicator, is just as applicable—both non-human and human losses indicate effectiveness; however, data collected on terrorist organizations focus on lethality. Together, our large-N analysis and case study complement each other and provide a more complete depiction of the processes underpinning organized violent dissent.

Large-N Analysis: Data and Methods

To review, we expect that, on average, high lethality numbers reflect more effective (defined here as more damaging) attacks and these attacks are more likely from hierarchically-structured organizations. The unit of observation is a single attack and we use the Global Terrorism Dataset (GTD), which tracks attacks from 1970 through 2010. For each attack, the GTD database estimates the number of deaths and injuries. Our dependent variable, lethality, is measured by summing the number of deaths and injuries per attack. In some cases, GTD lists the number of deaths or injuries as unknown. When this occurs, because we have no way of estimating the unknown values, we code the value as missing and lethality is equal to the known values. For instance, on May 18, 2007, an attack by the United Liberation Front of Assam (ULFA) resulted in 20 injuries and an unknown number of deaths; therefore, the lethality variable for this attack equals 20.

The most challenging aspect of examining our claims is finding a way to operationalize group structure, our main independent variable. To the best of our knowledge, no cross-national group-level data on this variable exist. Instead, we proxy this variable in two ways.

First, we use indicators of organizational centrality and specialization. Groups that are centralized and specialized have one locus of power (central) and engage in activities outside of their violence production (specialized). Together, these two features indicate hierarchy. Regarding the latter, when organizations are specialized they have specialized units devoted to the production of one (or one line of) good and/or services. Violence is often only one “product” that groups produce. Many violent organizations have extensive political arms and large branches devoted to delivering goods and services to populations. Perhaps most famous for their non-violent activities, Hezbollah in Lebanon and Hamas in Palestine deliver many goods and services.
including medical care, education, welfare, and religious training. Groups that produce multiple products specialize their operations such that personnel best suited for one activity are placed appropriately. We argue that hierarchy best suits this type of organization, in which "managers" can control and distribute specialized skill sets where needed. Furthermore, when groups can achieve specialization, those units devoted to attacks are most likely to be comprised of highly capable individuals who are, on average, more proficient at orchestrating lethal attacks.

However, simply observing specialization is not sufficient, which is why our proxy also measures centralization. Some violent organizations may operate under a branding scheme where groups calling themselves by the same name engage in a large variety of activities without any central command and control (hierarchy). When this occurs, true specialization is not achieved. The situation is merely a hodgepodge of loosely linked organizations engaging in a wide variety of activities. Thus, the centrality of the organization is important. We argue groups that are centralized and engage in a wide variety of activities are most likely to be hierarchical.

To construct our first proxy, we used data from Heger (2010) on community goods and services provision and data from the Terrorist Organization Profiles (TOPS) on organizational bases. Data from Heger (2010) covers goods and service provision by groups designated as "terrorist" by the United States, the United Kingdom, and Australia. The goods and services distribution measure is a dichotomous indicator. Groups that deliver goods and services receive a 1, all others get a 0. These data were collected by searching primarily major news media, government, and NGO-based descriptions of group's activities. Our measure of centrality comes from the National Consortium for the Study of Terrorism and Responses to Terrorism (START) Center’s Terrorist Organization Profiles (TOPS) data on terrorist groups. The TOPS data provide a count measure of the number of bases associated with a given terrorist organization. Centralized specialized organizations are those that have fewer bases (ideally one) and provide goods and services.

Our second proxy for hierarchy is more restrictive. Using the same measure of centrality and specialization, we further restrict hierarchies to be only groups that are centralized, specialized, and nationalist. Groups are assigned a 1 if they adhere to nationalist goals pursuant to TOPS’s group type classification. Because nationalist groups advocate for the separation from or overthrow of the status quo regime, these groups have an incentive to present themselves as alternatives to the current state structure, which often means they are involved in the distribution of goods and services within communities they represent. As viable alternatives to the state, these groups may be more prone to transparent leadership structures. For these reasons, we expect nationalist groups are more likely to organize hierarchically and, therefore, conduct more lethal attacks.

For both indicators we code all large allied organizations, such as al-Qaeda, at the sub-group level (for instance, al-Qaeda Organization in the Land of the Two Rivers, al-Qaeda in the Arabian Peninsula, or al-Qaeda Organization in the Islamic Maghreb). Since the GTD dataset codes attacks by constituent organization, we utilize this level of specificity and we argue that this is the appropriate way to conceptualize allied organizations. While we may consider the larger al-Qaeda network to be a decentralized alliance, its constituent parts may be highly hierarchic, representing a duality that should be consistently addressed in any empirical analysis. We believe coding groups at as micro a level as possible is preferable because local organizational traits seem more likely to affect attack patterns than transnational (or regional) alliances.
Table 2 compares the mean number of deaths for hierarchies and non-hierarchies. The most common attack results in zero injuries or deaths. However, when they are lethal, the average attack by hierarchical groups is more lethal. Using either of our proxies, hierarchical groups appear to conduct more lethal attacks. For both indicators, the effect of hierarchy on lethality appears to be an approximate two-fold increase in the severity of the attack.

We consider attacks with over 1,000 dead or injured to be outliers. There are five such attacks. Of the nearly 20,000 attacks by the groups in our sample, deaths from these few notorious observations constitute over 15% of the total dead or injured. These incidents include: the 9/11 attacks (two attacks), the al-Qaeda attack in 1998 against the U.S. embassy in Kenya, the Lashkar-e-Taiba (LeT) attack on Mumbai trains in 2006, an attack by the Shining Path on a vocational school in 1983 (with 10,000 injured, this was the most lethal attack in the dataset), and the Liberation Tigers of Tamil Eelam (LTTE) attack on a bank in Colombo in 1996. These attacks are enormously disproportionate and, consequently, we exclude them from our models discussed below.

In our models we include a number of control variables. First, we control for whether the attack was domestic or international. We generated this variable by matching the location of the attack to the location of the organization’s home base. When the home base of the group and the location of the attack are in the same country, we consider the attack “domestic.” Clearly this misses the mark for some attacks, particularly those in which the group targets a foreign entity within its home country. Attacks on U.S. diplomatic missions abroad fall into this category. Unfortunately we have no way to separate these, but we feel confident that our approximation is generally correct. We believe it is important to control for this factor because the logic driving international attacks may be different from that driving domestic attacks. International attacks are often orchestrated to deliver a big return by using tactics or methods that shock and awe to capture media attention. Some of the most infamous attacks, such as the Munich Olympic killings and 9/11, fit this mold very well. To the extent that an international venue increases the group’s willingness to engage in highly lethal attacks, we consider it a vital control.

Table 2. Lethality comparison: Hierarchy vs. non-hierarchy

<table>
<thead>
<tr>
<th>Group type</th>
<th>Hierarchy: Centralized and specialized</th>
<th>Non-hierarchy: (Not centralized or specialized)</th>
<th>Hierarchy2: Centralized, specialized, and nationalist</th>
<th>Non-hierarchy2: (Not centralized, specialized, or nationalist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Max</td>
<td>1362</td>
<td>10000</td>
<td>1362</td>
<td>10000</td>
</tr>
<tr>
<td>Median</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Mean</td>
<td>8.11</td>
<td>5.65</td>
<td>11.10</td>
<td>5.40</td>
</tr>
<tr>
<td>SD</td>
<td>32.14</td>
<td>86.55</td>
<td>38.76</td>
<td>83.46</td>
</tr>
<tr>
<td>N</td>
<td>3,859</td>
<td>16,986</td>
<td>2,556</td>
<td>18,262</td>
</tr>
</tbody>
</table>
In addition, we include a binary control for whether the group is state sponsored. Borrowing from Weinstein’s recent work on insurgent groups, we anticipate that when groups rely on funding from outside states they may be more inclined to engage in indiscriminate acts of violence that are more lethal. Our indicator for state sponsorship is from the TOPS data. TOPS provides descriptions of groups’ financial sources. From these descriptions we coded a binary variable indicating whether the group is state sponsored. For some groups the description indicated only state resources as the group’s funding source. For other groups, a number of sources (e.g., states, charities, drugs, and extortion) are listed. Regardless of partial or full support, if a group receives any support from a state we coded it as a state-sponsored organization. We also control for whether the attack was perpetrated by a suicide bomber. Suicide attacks are often used to inflict a large amount of damage and we expect this variable to have a strong positive relationship with our lethality measure.

Building on previous work, we use a control indicating whether the group is a religious organization. According to some authors, religious organizations may be characterized by a “club framework” in which operatives face higher defection constraints. These organizations are more capable of highly lethal attacks. In their work, Asal and Rethemeyer find supporting evidence for similar trends. Specifically, religion has a significant positive effect on lethality. To assign groups’ types, we used classifications from the TOPS website. Groups that are religious receive a one, all others (including hybrid types) are coded as a zero. In a similar vein, we control for whether the attack targeted private civilians based on the idea that attacks against civilians may be more lethal (coded based on GTD’s target field). Compared to attacks on government targets, police, journalists, or military targets, civilians are often attacked in public places where they congregate en masse. We suspect, therefore, that on average attacks on civilians will be more lethal.

Finally, to capture any country effects, we control for the type and strength of the regime in which the attack takes place (this is also usually the state in which the terrorist organization is based). To control for regime type we use the POLITY2 (hereafter, polity) variable which indicates whether the regime is very autocratic (−10) or very democratic (10). To control for the strength of the regime, we use the Composite Index of National Capability (CINC) indicator from the Correlates of War (COW) database.

Because lethality is bounded at 0, we use a count model to estimate the relationships between these variables and lethality. We use a negative binomial regression because we believe that the lethality measure exhibits some amount of positive contagion. If a group attacks and kills (or injures) some individuals, we anticipate it is more likely to do so again than had it not killed anybody in the first place. The alpha statistic on each model we estimated was significantly different from zero, indicating that an ordinary poisson count model is not appropriate. One issue we confronted in determining our modeling specifications is the effect of group-specific characteristics. Some groups may be more (or less) prone to conduct lethal attacks due to the nature of their leadership, ideological mandate, or the way in which they maintain public support. For these reasons, we estimated the models with robust standard errors clustering on each unique group.

**Large-N Test: Results and Discussion**

The data from Table 2 above suggest that our intuition is correct. On average, attacks by hierarchies are more lethal than attacks by non-hierarchies. When we
control for the effects of other factors, we get similar results. Tables 3a and 3b show our results. To get a sense of the magnitude of effect for each variable, Table 4 shows the incident rate ratios for models 3 and 7.

Models 1–4 use our first measure for hierarchy (centralized and specialized). Model 1 shows the results controlling for all group characteristics (government funded and religious). In model 2 we add in the controls for the type of attack (domestic, suicide, targeted private civilians). Model 3 then further includes controls for the regime in the country in which the attack takes place (CINC and polity scores). Model 4 excludes attacks by groups affiliated with al-Qaeda. To the extent that al-Qaeda may represent a unique organizational form, we exclude it here. Models 5–8 are similarly specified, but use our second measure of hierarchy (centralized, specialized, and nationalist).

Based on the results, several trends appear consistent. First, both measures of hierarchy perform as expected and with significant results. If our suspicions are correct and these proxies are good measures of organizational form, the results indicate that hierarchical groups are likely to conduct more lethal attacks compared to their flatter counterparts. The only exception to this finding is Model 4, the fully specified model excluding al-Qaeda affiliates, but this coefficient barely misses the mark. Because negative binomial coefficients are difficult to interpret, we included the

**Table 3a. Negative binomial regression (standard errors in parentheses)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchy (one base + services)</td>
<td>0.62***(0.37)</td>
<td>0.64***(0.38)</td>
<td>0.66***(0.40)</td>
<td>0.62*(0.42)</td>
</tr>
<tr>
<td>Government funding</td>
<td>−0.17(0.28)</td>
<td>−0.23(0.32)</td>
<td>−0.16(0.37)</td>
<td>−0.01(0.41)</td>
</tr>
<tr>
<td>Religious</td>
<td>1.06****(0.41)</td>
<td>0.77***(0.24)</td>
<td>0.60***(0.29)</td>
<td>1.25*(0.64)</td>
</tr>
<tr>
<td>Domestic attack</td>
<td>−0.47*(0.28)</td>
<td>−0.60*(0.35)</td>
<td>−0.40(0.39)</td>
<td></td>
</tr>
<tr>
<td>Suicide attack</td>
<td>1.46****(0.61)</td>
<td>1.22***(0.56)</td>
<td>1.02(0.62)</td>
<td></td>
</tr>
<tr>
<td>Target private civilians</td>
<td>0.46****(0.13)</td>
<td>0.46***(0.14)</td>
<td>0.42***(0.16)</td>
<td></td>
</tr>
<tr>
<td>Polity2</td>
<td>−0.02(0.01)</td>
<td>−0.02(0.02)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINC score</td>
<td>−3.04(7.42)</td>
<td>−11.86(7.48)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.47(0.26)</td>
<td>1.58(0.26)</td>
<td>1.83(0.32)</td>
<td>1.68(0.35)</td>
</tr>
<tr>
<td>AQ and affiliates excluded</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>20,812</td>
<td>20,812</td>
<td>19,035</td>
<td>18,104</td>
</tr>
<tr>
<td>Log-pseudolikelihood</td>
<td>−48662.5</td>
<td>−47867.5</td>
<td>−42980.3</td>
<td>−39981.3</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>15.58</td>
<td>37.28</td>
<td>31.18</td>
<td>83.55</td>
</tr>
<tr>
<td># Clusters (organizations)</td>
<td>57</td>
<td>57</td>
<td>55</td>
<td>38</td>
</tr>
</tbody>
</table>

***significant at .01, **significant at .05, *significant at .10.
Table 3b. Negative binomial regression (standard errors in parentheses)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchy (one base + services + nationalist)</td>
<td>0.98***</td>
<td>0.92**</td>
<td>1.05***</td>
<td>1.05***</td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td>(0.28)</td>
<td>(0.23)</td>
<td>(0.23)</td>
</tr>
<tr>
<td>Government funding</td>
<td>−1.12</td>
<td>−0.12</td>
<td>−0.04</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(0.26)</td>
<td>(0.25)</td>
<td>(0.29)</td>
<td>(0.31)</td>
</tr>
<tr>
<td>Religious</td>
<td>1.12**</td>
<td>0.82**</td>
<td>0.64**</td>
<td>1.46**</td>
</tr>
<tr>
<td></td>
<td>(0.41)</td>
<td>(0.26)</td>
<td>(0.32)</td>
<td>(0.51)</td>
</tr>
<tr>
<td>Domestic attack</td>
<td>−0.42*</td>
<td>−0.54*</td>
<td>−0.34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.31)</td>
<td>(0.34)</td>
<td></td>
</tr>
<tr>
<td>Suicide attack</td>
<td>1.45**</td>
<td>1.09**</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.63)</td>
<td>(0.55)</td>
<td>(0.60)</td>
<td></td>
</tr>
<tr>
<td>Target private civilians</td>
<td>0.47***</td>
<td>0.47**</td>
<td>0.43**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.14)</td>
<td>(0.16)</td>
<td></td>
</tr>
<tr>
<td>Polity2</td>
<td>−0.03**</td>
<td>−0.03*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINC score</td>
<td>−0.32</td>
<td>−8.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6.90)</td>
<td>(6.77)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.42</td>
<td>1.49</td>
<td>1.73</td>
<td>1.56</td>
</tr>
<tr>
<td></td>
<td>(0.25)</td>
<td>(0.21)</td>
<td>(0.30)</td>
<td>(0.32)</td>
</tr>
<tr>
<td>AQ and affiliates excluded</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>20,812</td>
<td>20,812</td>
<td>19,035</td>
<td>18,104</td>
</tr>
<tr>
<td>Log-pseudolikelihood</td>
<td>−48491.1</td>
<td>−47720.3</td>
<td>−42780.2</td>
<td>−39764.9</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>37.50</td>
<td>50.70</td>
<td>57.71</td>
<td>800.0</td>
</tr>
<tr>
<td># Clusters (organizations)</td>
<td>57</td>
<td>57</td>
<td>55</td>
<td>38</td>
</tr>
</tbody>
</table>

***significant at .01, **significant at .05, *significant at .10.

Table 4. Negative binomial regression, incident rate ratios for models 3 and 7 (standard errors in parentheses)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Incident rate ratios model 3</th>
<th>Incident rate ratios model 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchy (one base + services)</td>
<td>1.93 (0.77)</td>
<td></td>
</tr>
<tr>
<td>Hierarchy 2 (one base + services + nationalist)</td>
<td>0.86 (0.32)</td>
<td>2.87 (0.68)</td>
</tr>
<tr>
<td>Government funding</td>
<td>1.82 (0.53)</td>
<td>0.95 (0.27)</td>
</tr>
<tr>
<td>Religious</td>
<td>0.54 (0.19)</td>
<td>1.90 (0.61)</td>
</tr>
<tr>
<td>Domestic attack</td>
<td>3.40 (1.91)</td>
<td>0.58 (0.18)</td>
</tr>
<tr>
<td>Suicide attack</td>
<td>1.59 (0.23)</td>
<td>2.98 (1.66)</td>
</tr>
<tr>
<td>Target private civilians</td>
<td>0.97 (0.01)</td>
<td>1.61 (0.24)</td>
</tr>
<tr>
<td>Polity2</td>
<td>0.04 (0.35)</td>
<td>0.72 (5.00)</td>
</tr>
<tr>
<td>CINC score</td>
<td>19,035</td>
<td>19,035</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
<td>55</td>
</tr>
</tbody>
</table>

# Clusters (organizations)
incident rate ratios for models 3 and 7 in Table 4 (see above). The corresponding incident rate ratios for hierarchy indicate an increase in lethality by a factor of approximately 1.93 (model 3) when the perpetrating group is a hierarchy.

Interestingly, the findings for our second proxy appear much stronger than those for our first. For these hierarchical groups, lethality increases by a factor of approximately 2.87. Recall the first hierarchy measure accounts for groups that are centralized and specialized and the second proxy adds nationalist goals to the indicator. This suggests that nationalism has a strong effect on a group’s lethality, a finding that is consistent with our argument about the positive incentives nationalist groups face to organize hierarchically. The fact that this finding is highly significant and robust further suggests that hierarchical structure has a positive impact on a group’s lethality.

To ensure that the relationship between hierarchy and lethality is consistently positive, we re-estimated model 7 in several different ways. First, we applied the specifications to only non-suicide attacks. Second, we split the sample between attacks that had killed or injured at least five people or more and those that had killed or injured four or fewer. Finally, we estimated the model using only attacks that took place in states in which both a hierarchical and non-hierarchical group existed. We estimated each of these tests with both measures of hierarchy. In all instances the sign on hierarchy remained positive and usually statistically significant at traditional levels.

The group specific variables, government funding and religious classification, were mixed. While religion was consistently positive and significant, government funding was not. The impact of religion on lethality is not trivial. The incident rate ratios for this measure indicate an increase in lethality by a factor of approximately two. This finding is consistent with that of Berman (2009), Berman and Laitin (2008), and Asal and Rethemeyer (2008) and is further evidence that religious groups are particularly more damaging in their attacks.48

If anything, domestic attacks appear to be less lethal (although this finding is weak). As expected suicide attacks are much more likely to be lethal. This finding seems consistent with common understandings behind the intention of suicide

Table 5. Descriptive statistics (using maximum population from model 1, \(N=20,812\))

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lethality (DV)</td>
<td>5.18</td>
<td>1</td>
<td>18.08</td>
<td>0</td>
<td>702</td>
</tr>
<tr>
<td>Hierarchy (one base + services)</td>
<td>0.18</td>
<td>0</td>
<td>0.38</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Hierarchy 2 (one base + services + nationalist)</td>
<td>0.12</td>
<td>0</td>
<td>0.32</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Domestic attack</td>
<td>0.82</td>
<td>1</td>
<td>0.38</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Government funding</td>
<td>0.26</td>
<td>0</td>
<td>0.44</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Suicide attack</td>
<td>0.02</td>
<td>0</td>
<td>0.19</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Religious</td>
<td>0.04</td>
<td>0</td>
<td>0.19</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Target private civilians</td>
<td>0.19</td>
<td>0</td>
<td>0.39</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Polity2*</td>
<td>6.00</td>
<td>8</td>
<td>5.02</td>
<td>−10</td>
<td>10</td>
</tr>
<tr>
<td>CINC score*</td>
<td>0.009</td>
<td>0.003</td>
<td>0.011</td>
<td>0.0001</td>
<td>0.16</td>
</tr>
</tbody>
</table>

* \(N\) for Polity and CINC variables calculated using \(N=19,035\) from model 3.
missions. Incident rate ratios for this measure indicate an increase in lethality by a factor of approximately three to three and a half, the largest for all variables. Attacks that target private civilians are also positively related to lethality, although the effect is not as strong. This also seems consistent with the logic that private civilians may be cheaper and easier targets to attack en masse.

The regime-specific measures show weak results, although polity is consistently negative and significant in only Models 7 and 8. The implication is that when groups attack targets in less democratic states, those attacks tend to be less lethal. There are a variety of reasons that might explain this finding. For instance, attacks in autocracies may be targeted to do more economic damage than to kill or injure. In this case the finding is reflective of a data constraint and may still be consistent with the theory that hierarchies can inflict more damage. Targets may be more difficult to hit in autocracies as well, particularly in states with extensive and invasive internal security forces. The other regime-specific variable, a country’s CINC score, is not significant in any models.

We believe these findings provide strong initial support for our theory and hypothesis that hierarchically-structured organizations are more likely to conduct lethal attacks. While these findings are encouraging, in the next section we present the case of ETA in order to illustrate the mechanisms of hierarchy and their effect on the character of violence.

Case Study: Organizational Structure and the Effect on ETA’s Violence

For our purposes, the case of ETA offers a longitudinal window into how organizational structure forms and changes over time, and how these organizational changes can have effects on the lethality of a group. The most notorious (and important) part of the Basque nationalist movement that has existed since the mid-1800s is ETA. As part of a general Basque movement that has vacillated between hardliners and moderates, ETA’s niche emphasizes cultural aspects of Basque nationalism and its ready (and effective) use of violence as part of an overall revolutionary strategy of action-reaction-action. Thus it is perhaps the best-known aspect of Basque nationalism to the greater world because of the harm it perpetrated, but this lethality has come and gone over its 60-odd-year history.

While we understand organizational structure is not the only factor in explaining a group’s lethality, we stress its importance as a necessary condition in shaping coordination and capacity. Non-hierarchical groups simply cannot effectively distribute tasks and specialize to mount lethal attacks over time, although they are more likely to persist. Furthermore, as others have noted, ETA has persisted, but its existence has not always been lethal. The story of ETA’s organization—and its forays into violence—is characterized by periods of hierarchy punctuated by long periods of in-fighting and a lack of agenda-setting, multiple lines of accountability, and duplication of effort. As one observer put it, ETA spent “the first ten years of its existence struggling to define itself.” The case study of ETA is ideal for studying the organizational structure of violent groups. First, there is great variation of organizational structure over time. Numerous “ETAs” arose and sparred with other factions throughout its early history. Second, and perhaps more importantly for organizational structure, domestic and international institutions have also changed, as Spain moved from Franco’s dictatorship to a parliamentary democracy. Democracy enabled ETA to form hierarchically and functionally differentiate
among different tasks in a way they could not during the repressiveness of autocratic rule. While democracy led to a general decentralization and re-recognition of Basque culture and claims, ETA also became more violent, with the number of attacks peaking in the late 1970s. Although violence certainly is not condoned under democratic institutions, unlike during the Franco regime, ETA no longer had the incentive to decentralize to the same degree. Rather, what we see post-Franco is an internal split among different factions of ETA, and the increased lethality of ETA attacks as parts of ETA “specialized.” Furthermore, Basque politics capitalized on democratization and the formation of the European Union, which led to electoral opportunities to express grievances against the state, offering an alternative to the violence advocated by ETA. Thus, we can assess not only the effect of time, but also the effect of democratic transition on lethality. Consistent with our earlier arguments, we claim that when ETA is more hierarchical (that is, characterized by uncontested agenda-setting, specialized units, and clear lines of accountability), its attacks are more lethal. When ETA is non-hierarchical, we expect to see the converse.

This section looks closely at the link between organizational structure and violence perpetrated by ETA from its founding through the 2000s. We split the history into two chronological periods, pre and post-Franco, for ease in comparing the effect of democratic institutions and the effect of various organizational changes. Doing so allows us to control for alternative explanations that emphasize the impact of age on the organization’s lethality, and critiques that focus on the democratic transition as a reason for increased lethality. We demonstrate that while democracy might have enabled ETA to be more aboveground in its activities, hierarchy is the variable of interest that has affected ETA’s lethality throughout its history.

The Franco Years, 1959–1975. ETA was founded to resist the Franco regime in 1959 as part of a faction of radical university students who were disgruntled with the more moderate leanings of the Basque leadership (the political party PNV), but beyond that there was very little consensus about the organization’s purpose. Its focus has always been on maintaining Basque autonomy and culture, largely through revolutionary resistance, and part of it styled itself on the Third World tactic of action/repression/reaction. Different factions of ETA supporters—workers, Third Worldists, Basque culturalists, and militarists—would jockey for dominance throughout the early periods, each with its own way of thinking about the role of violence in the overall Basque movement. Competition between these various factions over both the role of violence and which revolutionary perspective best “represented ETA” contributed to a lack of consistent identity and struggle between various divisions. Soon after the initial ETA assembly, struggles between the factions led to splinter groups, such as ETA-berri (or New ETA), formed in 1966 by labor supporters. The major split occurred in between the ETA-V and ETA-VI assemblies that took place in 1968–1970. Ultimately, the Burgos trial of 1970—which Franco saw as an opportunity to crush Basque resistance through a series of show trials—reinvigorated the movement, then split along two distinct lines: militant (ETA-V) and labor (ETA-VI). 

ETA-V’s victory was brief, as the biggest ETA split occurred in 1974, with the formation of ETA(m) (military) and ETA(pm) (political-military). The main wedge was over the role of political participation in ETA’s strategy. ETA(pm), which advocated political participation in addition to using violence, became the stronger of the two, and structured its political program around three things: an independent and
reunified Basque Country; establish *Euskara* (Basque) as the official language; and establish socialism in Basque Country. However, the imminent death of Franco emboldened the Basque population, which swung its support behind ETA(m) in 1975. ETA(m) began garnering adherents rather quickly, and increased the violence against Spanish authorities in spite of Franco’s repeated declarations of “states of exception” in different Basque provinces. After ETA(m) emerged as the winner in the struggle for power, the group was able to consolidate leadership, and more importantly, centralize resources for more lethal and sustained violence. ETA(pm) merged with electorally-oriented Basque movement elements, renouncing violence altogether in 1981.

Until ETA(m) emerged as the sole ETA following democratization, ETA lacked hierarchical structure along the three dimensions we have identified in this paper. First, in terms of agenda-setting, there were always at least two agenda-setters throughout the authoritarian period. Disagreement over the role of violence played a heavy role in distinguishing factions in the later years, and only until ETA(m) took control did ETA firmly swing support behind the use of violence. The other aspect of agenda-setting that was unclear in this period was what ETA’s identity was, especially if we examine the history prior to ETA-V. Other revolutionary movements stimulated ETA's own aspirations beyond the Basque nationalist position.

In terms of accountability, loyalties were split among various ETA factions, as each side tried to gain as many supporters as possible in order to turn the tide against others. The lack of hierarchical authority led to the fracturing of activists into loosely-connected cells, making collective action nearly impossible in the early period between founding and 1973. This early structure can be explained by two things. First, there was disagreement among the various ranks and factions as to what ETA was. Second, having flatter organizational structure likely enabled ETA members to survive under Franco’s repressive regime. We can see the consequences of a lack of agenda-setting and accountability in an early example. A single cell launched the first violent action in 1961, without approval from any others. The attack resulted in no injuries or fatalities and the state under Franco reacted swiftly to repress the threat. Over 100 ETA members were arrested, tortured, and given 15-year prison sentences. Another 100 were exiled to France. Franco’s crackdown on ETA highlighted that the need to solidify the aims and strategies of the organization was paramount. This example points out the inability of other parts of ETA to hold the perpetrating cell accountable for its actions, and in fact, many more of them suffered as a consequence of uncoordinated action. In another example, the members of ETA robbed a bank in 1965, but two days later were recognized and arrested after being involved in a car accident. As a result of the ultimate failure of the attack, many members fled into exile, further attenuating a weak, decentralized organization that was struggling within its ranks to define itself. While some of these consequences were part of the action-reaction-action strategy, they nonetheless attenuated ETA forces.

Our third dimension, specialization, did not become relevant until ETA had created some semblance of hierarchy, which did not happen until ETA-V became dominant. Under ETA-V’s brief stewardship, the organization was not only able to agenda-set among its supporters and hold others accountable, but it also could create specialization among different individual ETA activists. One of the notable lethal attacks in this period was the assassination of Prime Minister Luis Carrero Blanco. Under ETA(m), a clearly-defined division of labor emerged, including separate offices for functions including international operations, finances, intelligence, legal
and illegal commandos, and border operations. Across the two organizations during the split, ETA(m) was clearly the more hierarchically-organized. This also helped it usurp power from ETA(pm). Under ETA(m)'s leadership, violence escalated. More attacks and a greater level of lethality—between nine and seventeen killings per year—characterized this period.

Certainly, ETA’s strategy of provoking state action against itself was successful. During this period the Basque region was the most policed region in Spain, and the violence against ETA continued into the democratic period under GAL, an anti-terrorist terrorist group with support from politicians and Spanish secret services. The GAL killed twenty-seven people between 1983–87. Although the repressiveness of the Franco regime cannot be denied, and it certainly played a role in the degree to which ETA was able to resist the government through violence, ETA was able to execute violent attacks with significant effects, such as killing Blanco. The state did retaliate with each and every single attempt by ETA, but the state was never able to quash the organization in a way that Spain under democratic rule has had more success doing through the use of multiple institutions: the police, the courts, and the political de-legitimation of ETA’s cause. The problem, however, lay not only in the repressiveness of the regime, but also in the lack of hierarchical order between the various parts of the group, thereby exacerbating the already grim conditions under which it operated. Until ETA(m) was able to wrest central command and control from ETA(pm), there was no singular source of agenda-setting for ETA, and no one faction could hold others accountable. Without a system of specialization in place, violence, if used, was sporadic, and often ineffective.

Under Democracy: 1976 to the Present. Shifting to democratic institutions proved to be a double-edged sword. For ETA, it meant that it could be more overt about its existence and its organization, but at the same time, community support for violent means to achieve more Basque concessions faded, particularly in cities. The coming of democracy did not placate Basque nationalism for ETA, and in fact, changed its claims to focus on Spanish repression as a continuation of Francoism. The death of Franco heralded a new era for ETA under ETA(m). ETA turned towards a multi-pronged approach to Basque nationalism that prioritized violence, and included institutionalized politics. The shift reflected general sentiments at the ballot box as the more moderate Basque party temporarily lost its support base to the radicalized Herri Batasuna (HB), founded in 1978 as ETA’s political wing. HB served as the focal point for the Basque Left for a period, but it also allowed ETA’s military goals to dictate political activity. Throughout the 1980s and 1990s ETA crystallized its role as the primary organization of the Basque movement. HB further reinforced ETA’s influence through its victory in the 1987 European Parliament elections. Support for HB, however, waned after a high point in 1986–7, in which they scored 20 percent of the vote among Basques, going into steady decline in the 1990s. In 2003, Spanish legislation banned HB as a political party, which has resulted since in a further weakening of ETA. Thus, the role of HB in substantiating ETA’s activities was key for ETA’s pursuit of its policy in the democratic era. That ETA was able to simultaneously coordinate both electoral and violent strategies for its political ends speaks to the hierarchical form that the group took after Franco—one that had defined agenda-setters that created accountability mechanisms for its members and could funnel people into specialized roles depending on their strengths.
ETA used HB to represent its interests in institutionalized politics. This period was marked by a "two-track" campaign, in which "violence would be synchronized with meetings and demonstrations" indicating a very high level of coordination that is not possible without a hierarchical structure that centralizes command and control.\textsuperscript{76} HB has won seats at the local, Basque autonomous region, and European Parliament levels.\textsuperscript{77} Although its leadership, which has strong ties to ETA, has been in flux because of arrests by Spanish authorities, by and large the survival of HB as a political force is remarkable both for its effect on ETA's political goals and its demonstration of ETA's coordinative capacity. The harnessing of common agenda-setting that could be advanced in multiple fora, combined with specialization by violent and non-violent wings of ETA, led to its persistence as a force in domestic politics. The presence and relevance of HB in electoral politics ushered in the Pact of Lizarra in 1998, which followed an ETA-declared ceasefire\textsuperscript{78} and attempts by ETA to negotiate with the Spanish government. HB united with other Basque parties (including PNV) as an attempt to forge a common front for Basque nationalism\textsuperscript{79} and legitimate its position.\textsuperscript{80} The truce was quickly broken after a year, but as noted by analysts, 1999 was notably a year without deaths, thereby demonstrating the ability for central leadership to determine ETA's attacks and the lethality of those attacks.\textsuperscript{81} Similarly, we can attribute a drop in the number of attacks following the second quarter of 1992 and a complete absence of attacks in 1993 (see Figure 1) to the capture of ETA leadership in Bidart by police March 29, 1992.\textsuperscript{82} Thus, following democratization, ETA was both its most lethal and its most vulnerable because of the hierarchy that became possible after democratic transition.

Figure 1 above illustrates how the number of attacks has varied over time. Democracy has had a mixed effect on ETA's lethality. Between 1978 and 1980, ETA averaged 81 fatalities in its resistance to democratizing processes. By contrast, the number dropped to 34 total deaths between 1981 and 1990. Under Franco between 1968–1977, ETA averaged seven assassinations a year. In recent years, the numbers
have tapered off significantly because of aggressive Spanish actions: 13 in 2001, 5 in 2002, 3 in 2003.\textsuperscript{83} Thus, while democracy has both encouraged the formation of HB and allowed for ETA to plan disruptions of democratic processes with violence, it has not made ETA necessarily more lethal than in years under authoritarian rule.

Organizational age also is not a significant determinant of lethality, as ETA has gotten less lethal in recent years as state police efforts plus the banning of HB have created significant roadblocks for ETA’s very survival. Instead, what we take from these trends is that lethality is a function of hierarchical organization, and the ability to set up agenda-setting, specialization, and accountability mechanisms within a group. Perhaps recognizing this, the democratic leadership in Spain recognized this, and was able to severely weaken ETA through raids and persecution of leaders; “it could be said the terrorist organization has entered a terminal phase...security forces are severely damaging its capacity to operate.”\textsuperscript{84}

Interestingly, ETA’s attack profile during this period demonstrates that its goal was to inflict damaging attacks rather than lethal attacks. The organization would routinely call in threats to locations where bombs were planted which typically resulted in damage (not deaths) and demonstrated capacity for damage and lethality. This is significant in the sense that ETA was able to coordinate attacks in such a way against transportation hubs and infrastructure that they could influence policy without hurting civilians. The change in using violence to destroy infrastructure, rather than kill individuals, demonstrates both the effect of hierarchical accountability and agenda-setting. Unlike the attacks under Franco, later ETA attacks were coor-ordinated and could be halted if the state indeed made the necessary concessions.

Sanchez-Cuenca identifies four discrete phases of ETA’s violent activity since 1973 through an analysis of quarterly fatalities attributed to the group.\textsuperscript{85} Democracy allowed for ETA to expand its reach, and create mutual accountability mechanisms for its violent actions, thereby creating a direct link between leadership and foot soldiers. A study of ETA in the early 1980s found that likely ETA activists, or \textit{etarras}, went through an exhaustive vetting process, after which assignments would be handed down hierarchically from the leadership.\textsuperscript{86} These orders would be enforced by ETA, mainly through selection (picking loyal \textit{etarras}) and social isolation of \textit{etarras} from their families and friends through the secrecy of their ETA commitment. Accountability also creates the capacity for specialization, as the leadership could commit loyal \textit{etarras} to increasingly more difficult tasks. Democracy also allowed for more identifiable agenda-setting, as more moderate Basques moved into electoral politics, allowing radicals to wrest control of ETA’s activities. ETA has effectively shifted strategies, for example, following Bidart in terms of targeting, moving away from police and military targets to anti-Basque nationalist politicians.\textsuperscript{87} Another more recent tactic has been to use street fighting (“Kale Borroka”) as a way to create instability through localized violence, which they used effectively during the 1998–9 ceasefire.\textsuperscript{88} Democracy also allowed ETA to become more hierarchical in structure because, at least in the beginning, it did not have to adopt the covert structures that it did under Franco. By solidifying hierarchical authority and using the dual-pronged strategy of violence and politics, ETA(m) was able to become more lethal beginning in the mid-1970s.

ETA(m)’s consolidation of leadership in the organization led to a significant escalation in violence, particularly in response to policy changes. The “great offensive” against democratization came in 1977, sparking a bloody wave of violence that would not end until 1981.\textsuperscript{89} The era is characterized by greater coordination of attacks, in turn, leading to higher lethality. For example, ETA began making
widespread use of the car bomb, beginning in 1985, when such a weapon killed an American citizen and wounded 16 Civil Guards. The infamous Hipercor bombing at a popular shopping center in Madrid in 1987, which resulted in 21 deaths and additional 45 injured, evinced the high level of coordination necessary for mounting complex operations that not only targeted highly-trafficked civilian areas, but also involved telephone warnings prior to the attack. Hipercor sparked protest from ordinary Spanish civilians, with Spanish officials declaring that ETA would not again target a public place, the declaration was premature. More car bombs would follow into the 1990s and 2000s, in addition to other kinds of bombings, targeting state officials, but also other privately property, such as discotheques and office buildings.

As Figure 1 illustrates, democracy has been a mixed blessing for ETA. Because its raison d’être was, in part, resistance to Franco, the rise of democracy actually eliminated one of the primary motivations to support ETA, and more moderate Basques have since gone the electoral politics route. The establishment of democratic mechanisms in the Basque region in the late 1970s and early 1980s was met with intensified ETA violence. Public opinion of ETA has been driven sharply downward with mobilization against ETA at the local and governmental levels. Noted Spanish judge Baltasar Garzon’s claim to fame was pursuing ETA terrorists, sometimes through what can be seen as extra-legal means through GAL and other anti-Basque forces. Until 1988, the Spanish government mimicked Franco-era policies of mass arrests.

The post-Franco period shows us that democracy was a necessary condition for ETA to become more lethal, but by itself, it is not sufficient to explain why ETA has vacillated over the period in both the types of violent tactics it adopts and how institutional change creates the conditions necessary for ETA to become more violent and radical, rather than fully embracing the participatory avenues that accompanied democratization. Rather, the organizational structures adopted by ETA members that mitigated and responded to domestic institutions demonstrates how lethality is a function of structure, among other variables. While democracy is an important factor in shaping organizational behavior, it is not the only variable. Furthermore, democracy does not affect all groups in the same way, and not even all groups under the same moniker—hence, the difference between ETA(m) and ETA(pm). Democracy can incentivize groups to become more hierarchical because the environment, at least in the short term, is more germane to resistance to the state, and these structures enable groups to mount more violent and lethal attacks.

Conclusions

We have argued that organizational structure affects a group’s violent output. Hierarchies are more likely to commit attacks that kill and injure higher numbers of individuals. Our quantitative analysis supports this argument and our qualitative analysis demonstrates how the mechanisms in our theory work.

This study makes several important contributions. First, we contribute to scholarship studying the effects of group structure on conflict outcomes by highlighting potential benefits of hierarchy organized violent groups. Coupling our findings with those from analyses of networked organizations, an interesting subsequent project might consider the conditions under which groups adopt one organizational form over another (or, alternatively, when they opt for a hybrid form). Thus, we add to the growing intuition that structure has important consequences for the effectiveness of organizations, which is a burgeoning field not just in terrorism studies, but also in security
and human rights work. Second, our work has relevance for policymakers. Most notably, it sheds light on the importance of structure in the study of non-state, violent organizations. Factions, splintering, and alternations in leadership likely play a large role in the type of violence the group is able to carry out. Thus, policymakers can determine whether a group is hierarchical (or not) and proceed accordingly, even with groups that are purportedly “covert.” Finally, we suspect this analysis has application outside the realm of violent political actors. Factors such as the agenda, success, and approach of non-violent organizations or grass-roots movements may also be subject to a similar analysis. Because all political groups need to organize, developing research on group structure will shape our understanding of global politics and effective governance. While our focus here has been on the lethality of terrorist groups, we look forward to future applications of the structural perspective for the study of organizations.

Notes

3. One of the most notable dimensions of destruction not accounted for in our conceptualization is the economic toll of terrorism. This can be an especially damaging aspect of terrorism. For more information, see H. W. Richardson, P. Gordon, and J. E. Moore II, eds., The Economic Impact of Terrorist Attacks (Northampton, MA: Elgar, 2005).


8. Eilstrup-Sangiovanni and Jones (see note 5 above).


12. See Lake (note 11 above).

13. Less hierarchical organizational forms have a tendency to become more indigenous to the geography or function they perform—divisions are more likely to respond to local, rather than central, demands. Cooley (see note 11 above).

14. Powell, Powell et al., Podolny and Page (see note 4 above), Castells (see note 5 above).

15. Eilstrup-Sangiovanni and Jones (see note 5 above), 8.

16. Eilstrup-Sangiovanni and Jones, Kahler, and Sageman (see note 5 above).

17. For a discussion on the bureaucratic dilemmas faced by Al-Qaeda in balancing operational efficiency and control see “Harmony and Disharmony Exploiting al-Qa’ida’s Organizational Vulnerabilities” February 14, 2006, Combating Terrorism Center, Department of Social Sciences United States Military Academy.

18. Ibid.


20. Asal and Rethemeyer (see note 5 above).


22. Group structure varies from individual actors acting in isolation to decentralized alliance relationships to hierarchical, vertically-integrated forms. Networks are the “middling” category in this conception. This typology builds largely on Lake’s (1999) study of interstate security relationships. We neglect the category of “anarchy” from Lake because we assume some kind of organizational threshold necessary for a group to conduct any attacks.

23. This is not to say that the differences between unique forms of non-hierarchy are not significant. Instead of a typology of structures, which as we note has been done in other
contexts, our task here is simply to establish and highlight the role of hierarchy’s distinctive features in the observed violent output of these groups.

24. Kahler (see note 5 above).


27. For a few attacks, this may not be the case. Specifically, when groups call in attacks to authorities in order to try and deter bombs before detonation, these attacks may be intended to demonstrate capabilities without inflicting any damage. Generally, attempts to minimize damage and lethality are very rare occurrences.


32. Coase (see note 25 above); Klein (see note 25 above).

33. Quantifying damage is at best tricky and at worst impossible. Comparisons between the economic costs borne from the attacks on 9/11 and the psychological devastation that comes from losing a loved one are impossible. Most datasets track the human toll of attacks, perhaps because these estimates are frequently reported.


35. GTD data misses attacks in 1993. For information on GTD’s scope and the definition of terrorism, see http://www.start.umd.edu/gtd/using-gtd/. We also ran similar models using the now offline Memorial Institute of the Prevention of Terrorism’s Terrorism Knowledge Base (MIPT-TKB) dataset. We accessed that data multiple times from 2004-March 2008 at which point it was removed. It is currently being updated and hosted as the RAND Database of Worldwide Terrorism Incidents. See http://www.rand.org/nsrd/projects/terrorism-incidents.html for more information. The results from MIPT are not significantly different from GTD.


39. Descriptive statistics for all variables are in the appendix, Table 5.

40. Data on groups’ home bases were gathered from the TOPS data.


46. To be certain, we re-ran all our models using Poisson and OLS regressions and did not find significant differences.


51. Zirakzadeh (see note 60 above).

52. Clark (see note 60 above).

53. Ibid., 213.

54. Ibid., 133.


57. In particular, see Beck (see note 54 above), chapter 6.
Muro (see note 51 above), 584–585.

ETA(pm) would not formally disappear until 1982.

It later became Batasuna, shortly before its banning, as it merged with Euskal Herritarrok in 2001.


Sanchez-Cuenca (see note 59 above); Tejerina (see note 56 above), 47.

Alonso and Reinares (see note 52 above), 269–272.


Sanchez-Cuenca (see note 59 above); Tejerina (see note 56 above), 47.

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