Studies in Conflict & Terrorism

ISSN: 1057-610X (Print) 1521-0731 (Online) Journal homepage: http://www.tandfonline.com/loi/uter20

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To cite this article: Brecht Volders (2016) Assessing the Terrorist Threat: Impact of the Group's Organizational Design?, Studies in Conflict & Terrorism, 39:2, 106-127, DOI: 10.1080/1057610X.2015.1092842

To link to this article: http://dx.doi.org/10.1080/1057610X.2015.1092842

Published online: 16 Oct 2015.

STUDIES IN CONFLICT & TERRORISM
2016, VOL. 39, NO. 2, 106–127
http://dx.doi.org/10.1080/1057610X.2015.1092842

Routledge
Taylor & Francis Group

Assessing the Terrorist Threat: Impact of the Group's Organizational Design?

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ABSTRACT

Each terrorist organization faces a critical tradeoff between effectively managing the organization's violent behavior while remaining secure from counterterrorism efforts. Drawing on organization theory and terrorism literature, this article develops theoretical linkages between the organizational design of a terrorist group and this critical tradeoff. It considers the impact of four key design parameters: membership, operational space and time, formalization, and centralization. The first two structural parameters construct the physical anatomy of a terrorist organization. The latter two structuring parameters prescribe or restrict the behavior within this organizational context. Net advantages by means of rising structural design parameter values are increasingly offset by the organizational strength and security vulnerabilities that inherently follow from the rising structuring parameters.

ARTICLE HISTORY
Received 16 April 2015
Accepted 7 September 2015

> What could be more important to the effective functioning of our organization than the design of their structures? Yet what do we really know about such design?[1]

Henry Mintzberg—the godfather of organizational theory—opens his 1993 book on designing effective organizations with this thought-provoking question. Focusing attention to conventional organizations—from repair shops to automobile companies, police forces to national governments—he describes five organizational ideal-types of design,[2] how they function, and the conditions under which they are appropriately found. Defining the organizational design as, "the sum total of the ways in which its labor is divided into distinct tasks and then its coordination is achieved among these tasks," Mintzberg demonstrates the impact of the organizational design on the effective functioning of any organization.[3] It shapes the internal harmony of the organization, as well as the basic consistency with the group's external environment. The design parameters are presented as levers that can be pulled and knobs that can be turned to affect the division of labor and the coordination of tasks in the organization.[4] Yet, terrorist organizations occupy a very limited place in the organization literature. None of the groundbreaking texts explicitly cover this theme.[5] Organization studies have often neglected clandestine illegal organizations.[6]

Recently, however, there has been a reverse move within terrorism studies to adopt the terrorist *organization* as the unit of analysis. This perspective is part of a tendency within

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terrorism studies to break away from treating terrorism as a problem sui generis. These scholars ask the question, "of what is terrorism or the response to terrorism a case?"[7] Like regular organizations, terrorist groups face conventional organizational challenges. Terrorist organizations are based on a division of labor, a decision-making structure, and rules and policies. Roles, power, and responsibilities need to be effectively and efficiently assigned, controlled and coordinated. The organizational design of a terrorist group is an essential variable in this daunting task. This theoretical article adds to the small (but growing) line of inquiry that applies established organization theory to terrorism.[8] To be precise, the article considers the impact of four design parameters in any terrorist organization's critical trade-off between effectively managing the organization while remaining secure from counter-terrorism efforts: the structural parameters *membership* and *operational space and time*, and the structuring parameters *formalization* and *centralization*. These design parameters will impact the effective functioning of any terrorist organization.

After placing the subject in the existing literature and elaborating on an *effective organization*, the remainder of this article will develop explorative theoretical linkages between the organizational design of a terrorist organization and a terrorist organization's critical trade-off. First, the article elaborates on the unique impact of the individual design parameters. Second, attention is focused to the joint impact of these design parameters. This article aims to better understand the inherent paradox that terrorist organizations face in producing an effective violent output. Net advantages by means of rising structural design parameter values are increasingly offset by the organizational strength and security vulnerabilities that inherently follow from the rising structuring parameters. While this article acknowledges Ranstorp's warning that disparate evidence should not be knitted together selectively to suit the case without regard for the specific context,[9] it does aim to gauge the impact of terrorist organization's design parameters by means of empirical examples to enhance the tangibility of this theoretical article.

Organizational Design Matters

A Terrorist Organization's Effectiveness

Martha Crenshaw's path-breaking work makes the analytical distinction between the collective rationality of a terrorist organization and the individual rationality of a terrorist.[10] An individual terrorists' rationality is not necessarily in line with the organizational objectives. Max Abrahms, for instance, convincingly argued that individual terrorists are often social solidarity seekers. He refers to research over a wide array of terrorist organizations—including the Euskadi Ta Askatasuna (ETA), the Irish Republican Army (IRA), the Partito Comunista Italiano (PCI), the Rote Armee Fraktion (RAF), and the Brigatte Rosse (RB)—where terrorists testified that they joined the armed struggle to maintain social relations rather than personal attachment to the organization's goals.[11] Yet, the particular act of terrorism—whether motivated by personal believes or organizational goals—is most likely to benefit the collective preferences and objectives of the terrorist organization. This article starts from terrorist organizations as strategic actors. Contingent on the social environment, the organization resorts to violence as a rational course of action to attain its collective preferences and objectives.[12] Analyzing their effectiveness in achieving these collective objectives can lead to significant implications for threat assessments and

counterterrorism efforts. Yet, therefore it is first necessary to clarify how to define a terrorist organization's effectiveness?

Popular wisdom dictates that the primary criteria to define effective acts of terrorism is the number of casualties. Yet, any attack should be framed in a terrorist organization's deliberate strategy to advance its end.[13] Effectiveness is a multilayered concept. Competence across all levels of the "taxonomy of strategy" is required to categorize an act of terrorism as successful.[14] The highest level is the strategic tier. It consists of a plan— namely the resort to violence—to achieve their organizational goals. These objectives can evolve over time,[15] and are achieved at the lowest level, the tactical level. This refers to each particular act of terrorism— beheadings, armed assaults, kidnapping, or others—and their preparatory measures. The tactical level is linked to the strategic level by means of the operational level. As Lonsdale pointed out: "Conceptually, this level links tactical engagements together in the overall terrorist strategy. Materially, we can think in terms of a geographic area within which forces are moved."[16] An tactical success might lead to (long-term) strategic success, but may also result in negative strategic consequences. It can, for instance, lead to declining support by the organization's constituency. In addition, it is important to remember that the qualification of effectiveness is subjectively interpretable. The standard of success can be set at different bars by different actors. It may not come as a surprise, then, that assessments on the effectiveness of terrorist organizations vary widely.[17]

Most problematic, however, is that a majority of the threat assessments adopt a unitary approach focusing on the terrorist organization's strategic political objectives. This "systematically disregards key causes, mechanisms, effects, and perceptions of non-state violence."[18] Indeed, terrorist organizations have two types of collective objectives: (1) On the one hand, there are the strategic political objectives of terrorist organizations. For instance, the ETA sought more territorial independence for the Basque country, the Islamic State (IS) installed a Caliphate and aims to consolidate and extend their Islamic reign, the IRA pursued more autonomy for Northern Ireland, and Aum Shinrikyo aimed to destabilize the Japanese government. (2) On the other hand, terrorist organizations pursue organizational objectives. No organization can be effective if it cannot endure.[19] Any organization wants to maximize its strengths and ensure its survival—also as a means to achieve their strategic political objectives.[20] Management, effective allocation, and maximization of resources are of essential instrumental importance.[21] The well-thought-out beheadings by IS, for instance, are partly intent to recruit *jihadists* through propaganda by the deed.[22] Moreover, referring to an everyday example, terrorist organizations constantly face the need to train and pass on knowledge, such as operational skills and techniques. The book *The Management of Savagery* is a prime example of the dual nature of the *effectiveness* of terrorist organizations: the Islamist strategist Abu Bakr Naji contemplates the "path for establishing an Islamic State"—which refers to the strategic political goals of the organization—and the "mastery of the art of management"—which refers to the organizational strength and survival of the organization—for Al Qaeda and other *jihadists*.[23]

The Role of the Organizational Design

In order to achieve both of these types of collective preferences and objectives, terrorist groups need to organize the coordination and control over their members to effectively carry out attacks. This inherently implies the need to overcome standard organizational issues,

such as resource allocation, disciplinary procedures, recruitment dilemmas, adversarial competition, and even bookkeeping requirements. The Harmony Program—which contextualizes the inner functioning of Al Qaeda and associated movements by means of captured documents—illustrates these organizational challenges: a "lessons learned" document from the armed *Jihad* in Syria articulates extensively, for instance, on, "the problem of confidentiality and internal security," "the problem of undisciplined out of control members," and "the problem of control and management in spread out organizations."[24] Not surprisingly, a number of recent terrorism studies apply established organization theories to terrorism in an attempt to better explain, assess, and counter terrorism.[25] Three of them stand out: (1) Michael Kenney builds on theories of competitive adaptation to analyze the effectiveness of Islamist extremist organizations. He convincingly argues that these organizations store knowledge in practices and procedures, and subsequently select routines that produce satisfactory results.[26] (2) Eli Berman adopts a political economy approach to analyze the relationship between terrorism and religious cults. He stresses the particular importance of structures of incentives offered to the organization's members to strengthen their resilience.[27] (3) Jacob Shapiro applies a principal-agent approach to compare Al Qaeda, nineteenth-century Russian revolutionary groups, and the IRA. As more implicitly acknowledged by Kenney and Berman, Shapiro superbly demonstrates a major organizational challenge each terrorist organization has to face: how to retain operational effectiveness and organizational control, while simultaneously securing the organization's endurance and survival? There is a critical tradeoff between the two types of collective objectives: terrorist organizations pursuing their collective objectives benefit by exercising command and control over their agents. Yet, the tools to coordinate and control violence create some measure of operational vulnerability. Coordination, monitoring and sanctioning reduces the security of the organization. Communication and internal links between members and leaders can be exploited by counterterrorism efforts, thereby endangering the terrorist organization's strength and survival. Shapiro coins this critical tradeoff as "the terrorist dilemma."[28]

While each author does an excellent job in elaborating on the specific dynamics and processes of "the terrorist dilemma," this article adds to this line of inquiry by pitching more attention to a key underlying determinant of the nature and impact of this critical tradeoff: the organizational design. "The terrorist dilemma" might be influenced by law enforcement activity and organizational ideology. Yet, the organizational design shapes the configuration of tasks and activities, and the way coordination is achieved among these tasks. It is the crux in shaping the division of labor and the coordination of assignments. Following the organization theorists Campbell, Bownas, Peterson, and Dunnette, this article distinguishes between structural and structuring design parameters. The structural design characteristics refer to the material characteristics of a terrorist organization. *Membership* and *operational space and time* construct the physical anatomy of a terrorist organization, and constitute a foundation within which the organization functions. It defines the context in which behavior occurs.[29] The structuring design characteristics refer to the policies and activities within the organization that prescribe or restrict the behavior of organization members. *Formalization* and *centralization* shape the way that tasks and activities are communicated and coordinated.[30] Surprisingly, few earlier studies systematically explore the impact of these organizational design parameters. This might be explained by the fact that organizational design cannot be treated as a fully exogenous independent variable. As mentioned, it is also dependent on the social environment in which terrorist organizations operate and their particular

organizational objectives. Moreover, the hybrid character of terrorist organizations often thwarts clear analyses. Each terrorist organization's design is unique and fluctuating over time. No exact typology can be drawn up. This theoretical article tackles this inherent complexity by treating the contingent parameters as given within a fixed timeframe. Drawing on organizational design and terrorism literature, the article explores the ways that varying design parameters values influence the nature and impact of the terrorist dilemma on the effective functioning of a terrorist organization.

However, before developing these explorative theoretical linkages, it is necessary to define the scope of the article. What is a terrorist *organization*? It is a daunting task to properly describe the properties and boundaries of a terrorist organization.[31] The *hierarchical* and *network* perspectives are often used to distinguish between various types of organization. Yet, various alternatives are possible. For instance, Mishal and Rosenthal suggest a *dune* organization,[32] Jackson distinguishes between *groups, networks*, and *movements*,[33] and Kilberg differentiates between *market, all-channel, hub-spoke, or bureaucracy* types of terrorist organizations.[34] There is a wide variety of terrorist organizations, and typologies. In order to assess how design parameters influence the impact of the terrorist dilemma on the terrorist organization's effective functioning, it is hence suitable to focus on *organization* rather than organizations.[35] A minimal level of organization is necessary. Jones and Libicki define a terrorist organization as "a collection of individuals belonging to a non-state entity that uses terrorism to achieve its objectives. Such an entity has at least some command and control apparatus that, no matter how loose or flexible, provides an overall organizational framework and general strategic direction."[36] The command and control apparatus lies at the core of the security dilemma: organization and coordination inherently imply security considerations for the terrorist organization. Thus, the scope of this article is limited to a terrorist entity making use of *at least some command and control apparatus.* This most often concurs with prolonged terrorist campaigns by an organization. Yet, brief terrorist campaigns, or even complex singular attacks might be attributed to *organized* terrorist groups as well. Lone-wolfs—in the strict meaning of the concept—or various uncoordinated attacks, on the other hand, do not fall within the scope of the article.

Strategic Success versus Organizational Security

An effective terrorist organization needs to master the critical tradeoff between executing successful terrorist attacks on the taxonomy of strategy, while simultaneously remaining strong and secure vis-à-vis competitors and state actors.[37] Terrorist organizations operate in an hostile environment. Their illegal character implies that they need to rely on stealth and secrecy to complete their missions.[38] Yet, this often contradicts the tools to control and coordinate acts of terrorism. Risks to the effective functioning of a terrorist organization can materialize in two ways: (1) Various communication and coordination mechanisms to organize successful terrorist engagements entail significant direct vulnerabilities: wireless as well as material communication modes can be intercepted and interfered with from a distance; personal electronic devices (e.g., cell phones) can be intercepted or used for finger prints; mobile computing can lead to loss of critical data and operational compromise; Internet access facilitates bidirectional access; standardized routines, rules, and procedures may define patterns that law enforcement agencies and intelligence services can exploit; and so on.[39] These weaknesses can lead to tactical, operational, and strategic failures by the terrorist

organization, thereby endangering the organization's strength and survival. (2) Lacking communication and coordination tools—due to security considerations by the terrorist organization—increase the risk that tactical engagements do not fit the strategic goals of the terrorist organization, or are badly executed. Control over members diminishes. This can lead to individual terrorists using too much violence, too little, or attacking the wrong target, thereby damaging the strategic success and operational strength and security of the organization: Shapiro mentions the 1998 Real IRA (RIRA) bombing in Omagh, Northern Ireland. This tactical engagement killed twenty-nine people. However, the indiscriminate attack aroused intense public outrage at the RIRA, and discredited Republic opposition against the Good Friday Agreement. Support for the RIRA withered, and following the bombing, the group conducted only three attacks from 2003 to 2008.[40] Loss of popular support and the likelihood of defections reduces the organization's strategic political impact while simultaneously increasing opportunities for law enforcement agencies to compromise tactical and operational engagements, and weaken the organization as such.

The nature and impact of this dilemma is directly shaped by the organizational design of a terrorist organization. Yet, how exactly do the design parameters have an impact on the effective functioning of a terrorist organization? Building on organizational theory and terrorism literature, the article identifies two structural parameters—membership, and operational space and time—and two structuring parameters—formalization and centralization. The structural parameters shape the framework in which the terrorist organization needs to function. As mentioned, it defines the context within which their behavior occurs.[41] The structuring parameters refer to the policies and activities that restrict or prescribe the behavior within that organizational context. These bring the terrorist dilemma actually to life.

Structural Parameters

Membership

Mintzberg discusses the design of individual membership positions in any organization. He elaborates on the specialization of any position in question, and the *training* and *indoctrination* required by that job to function as an organization. Organization theory defines training as, "the process by which job-related skills and knowledge are taught," whereas indoctrination, "is the process by which organizational norms are acquired."[42] A jobholder who does not develop the necessary skills and attitude will decrease the effectiveness of the organization.[43] Specialization and accountability by its members diminishes. Moreover, a third dimension within this design parameters refers to the mere *quantity* of members—which serve as the acting force of the organization. The dynamics caused by these three dimensions are of particular importance for a clandestine terrorist organizations to function effectively.

Training and indoctrination drives operatives to successfully engage in complex terrorist attacks or (prolonged) terrorist campaigns. It is beneficial to the organization's strength and survival, and facilitates the achievement of their strategic political objectives: riskful control, command and coordination requirements over the organization's members decline. Training and indoctrination increases the operational capability of terrorists, and reduces diverging preferences and uncertainty over what they should do given what they observe about the world.[44] For instance, Aum Shinrikyo's appealing apocalyptic narrative—and the charismatic nature of their leader Asahara Shoko—enabled them to recruit over 10,000 members. This included a group of brilliant young scientists and engineers.[45] Their specific skill set

enabled the launch of seventeen known chemical and biological attacks between 1990 and 1995—with the 1995 Sarin attack as the most notorious example.[46] This type of chemical gas can only be produced by trained chemists. Moreover, these well-trained members remained loyal to the organization's cause throughout the entire weaponization process.[47] While the tactical and strategic political success of these chemical and biological attacks is open to debate—it did not lead to mass casualties nor did it trigger a war between the United States and Japan or topple the Japanese government—it is clear that high levels of training and indoctrination would be necessary to successfully conclude such complex acts of terrorism in line with the organization's strategic political goals. Yet, training and indoctrination also matter to the successful achievement of less complex attacks and prolonged campaigns of terror. Ranstorp indicated the importance of various Hezbollah training camps in the Bekaa region in Lebanon. Fighters received advanced logistical and technical assistance concerning infiltration techniques, explosives, and intelligence operations.[48] Likewise, Assaf Moghadam referred to the essential role of training and indoctrination for Palestinian suicide terrorism during the Second Intifada.[49] Furthermore, membership also impacts the success of prolonged terrorist campaigns by means of its mere quantitative value. A high number of individual terrorists enables the group to carry out multiple attacks, and moderate defections or physical losses—be it at the senior level, the supporting staff, or the operational core.[50] This is primarily—but not exclusively—relevant with respect to safeguarding the organizational strength and survival. Al Qaeda is still able to carry out simultaneous terrorist attacks on a regular basis because they have an active presence in more places than it did on 11 September 2001.[51] Their global *jihad* often benefits from "resources mobilized for other purposes."[52] Thus, sufficient well-trained and indoctrinated members increase the likelihood of a terrorist organization achieving its organizational and strategic political objectives. Tactical, operational, and strategic capability and control are positively influenced.

Yet, marginal returns of this design parameter diminish as the organization requires more training and indoctrination and/or the organization grows larger. Organizational strength and survival is threatened: providing better training and indoctrination also requires more communication and coordination. For instance, Theohary and Rollins point to the Internet and social media as an essential training and propaganda tool.[53] Yet, various plots have been foiled due to the close monitoring of several *jihadi* websites. The Central Intelligence Agency (CIA) is known to use "honey pots" websites to actively attract and detect existing and potential *jihadists*. Each communication or coordination tool can be intercepted, thereby putting pressure on the security of the organization. Considering the quantitative dimension in this parameter, even despite high levels of training and indoctrination, a growing number of members inherently complicates command and control over the group. It raises the possibility that members are detected, that independent tactical actions fail, or that these actions are not in alignment with the strategic expectations of the terrorist organization.[54] This hence leads to substantial vulnerabilities to the organizational strength and survival—together with the possible negative consequences for the organization's strategic political objectives. The Fuerzas Armadas Revolucionarias de Colombia (FARC) members assassinated nine hikers in Colombia's Purace National Park in February 2000 without the prior knowledge or consent of the organization's leaders—pointing to a misfit between the tactical and strategic level.[55] The subsequent turmoil within the organization and their decreased popular support reduced the organization's operational capability and strengthened the likelihood of leaks, detections, or defections. It weakened the organization. Likewise,

contemplating the survival of the organization, Aum Shinrikyo executed, tortured, or isolated members who appeared to have moral qualms about the organization's activities.[56] Abu Bakr Naji acknowledges another problem of growing numbers by stating that: "the presence of spies may come with the expansion of the movement, especially when we mix with the people in the societies of the regions which we manage."[57] Although the point of diminishing returns can be postponed by qualitative leaders, an increasing number of members impedes clandestine groups from effectively keeping tabs on their activities.[58] The benefits associated with the growth of well-trained and indoctrinated members are increasingly offset by managerial difficulties in effectively controlling the group and securing the terrorist organization's strength and survival. This is instrumental to terrorist organizations achieving their political objectives.

Operational Space and Time

Organization theory indicates the importance of better understanding the relation between organizations and their environment. Any organization must adapt and develop appropriate responses to the tactical, operational, and strategic environment in which they operate. Going beyond principles of internal design of the organization, Morgan argues that "management must be concerned, above all, with good fits (with their environment)."[59] Adopting this to terrorist organizations, these groups need to cope with the difficult task to operate in a hostile environment. Terrorist organizations typically face counterterrorism pressures that limit their activities in areas of operations.[60] In order to function effectively, they require a minimal level of operational space and time. This refers to "ungoverned, under-governed, or ill-governed physical areas where terrorists are able to organize, plan, raise funds, communicate, recruit, train, transit, and operate in relative security because of inadequate governance capacity, political will, or both."[61]

Increased operational space and time enables terrorist organizations to carry out more complex or longer terrorist campaigns. Relative security benefits the strength and survival of the organization, and subsequently facilitates the achievement of strategic political objectives. By withstanding hostile counterterrorism efforts, the organization can permit recovery from disruptions and hide from mounting pressure, and maintain and dictate the pace of operations.[62] Command and control over the individual members is more easily executed. Direct face-to-face interaction facilitates a degree of trust, and reduces security risks.[63] Given the 58 groups officially designated as a foreign terrorist organization by the United States, at least 39 of them enjoy one or more safe havens. Hezbollah, the Haqqani network, Lashkar-e-Taiba, and Al Qaeda in the Islamic Maghreb—some of the most capable and resilient terrorist organizations—are known to have established sanctuaries. Their effectiveness is not only about their ideology, size, or goals.[64] Likewise, the RAF and the FARC are two other examples of terrorist organizations which relied extensively on safe havens to terrorize their respective audience.[65] Operational space and time enables the effective management of resources while facing a hostile environment. It temporarily relieves the terrorist organization from security considerations, thereby safeguarding the organizational strength and survival. Moreover, it enables their proficiency across each level of the strategy taxonomy, which benefits both their organizational and strategic political goals.

Yet, each moment that terrorists actually organize, plan, raise, funds, recruit, train, transit, and operate, provides an opportunity for law enforcement agencies to permeate their *relative* security.[66] Full-scale security throughout time is an illusion. Command and control by the

terrorist organization cannot be perfect. A complex act of terrorism or prolonged terrorist campaign requires more preparation and coordination, thereby putting higher demands to the required quantity and quality of operational space and time. It therefore inherently implies increased risks with respect to the possibility of leaks, defections, or detections. A fragment of a letter of bin Laden to Shaykh Mahmud ('Atiyya Abdul Rahman) illustrates their worries about relative security: "(Regarding the brothers in Waziristan). … It is possible that they (the enemy) have photographed targeted homes. The brothers who can keep a low profile and take the necessary precautions should stay, but move to new houses on a cloudy day."[67] Likewise, the 9/11 plot included dozens of international trips and secret meetings in Europe, the Middle-East and the United States.[68] Detection of one of these trips could have prevented the plot from succeeding. Khaled Sheikh Mohammed (KSM)—the mastermind behind the 9/11 plot—also explicitly looked at demonstrable patience by the candidate hijackers.[69] As preparations extended well beyond a year, he knew that any moral qualm by these candidates could lead to leaks or defections. A more modest operation would not have these requirements. Moreover, a complex or large scale of operations also holds an increased likelihood of accidents. The 1995 operation "Bojinka" was meant to—among other things—blow up a dozen commercial airliners by means of nitroglycerin-based bombs.[70] The plot progressed a great deal but was uncovered when they made a mistake while mixing a batch of explosives in their apartment. The following fire drew the attention of the Philippines authorities, thereby preventing the plot.[71] The possibility to permeate the relative security of a terrorist organization is to a large extent dependent on the government's political intent and capability vis-à-vis individual terrorist groups.[72] Yet, assuming active governmental agencies, increasing demands to the required operational space and time by a terrorist organization inherently implies increasing opportunities for counterterrorism efforts to disrupt the effective functioning of a terrorist organization. Their organizational strength and strategic capability can be undermined by permeating the *relative* security of the group.

Thus, increasing *membership* and *operational space and time* benefit the organizational strength and capability—and is therefore also advantageous to the organization's strategic political objectives. Yet, it puts stronger demands on the command, control, and coordination of the terrorist organization. This can compromise their effective functioning. The structuring parameters refer to the policies and activities that actually restrict or prescribe the behavior within this organizational context. *Formalization* and *centralization* bring the terrorist dilemma actually into life.

Structuring Parameters

Formalization

Traditional organization theorists have defined formalization as, "the extent to which rules, procedures, instructions and communications are written, and the degree to which roles are explicitly defined."[73] It prescribes, and ultimately predicts and controls, variable behavior of the members of the organization. A strong level of formalization ensures clear and compelling communication, well-defined roles and task allocations, and a well-developed monitoring, control, and sanction mechanism.[74] Preference divergence and uncertainty over the suitable course of action are reduced.

Terrorist behavior can be regulated in three formal ways[75]: (1) Behavioral formalization by position. Specific conditions are attached to the job in question. For instance, Harmony

documents clarify that the president of a terrorist military committee needs to possess, "a suitable proportion of Islamic Law, work experience of no less than five years, complete military operational experience in the battlefront and bases, and must not be less than thirty years of age."[76] (2) Behavior formalization by work flow. Rather than a job description, specifications are being attached to the work in question. For instance, Al Qaeda in Iraq employed so-called membership commitment forms. These were meant to remind the members to their particular tasks.[77] (3) Behavioral formalization by rules. General rules and conditions are being issued. For instance, Al Qaeda made an employment contract with their potential recruits. Besides rules about their adherence to eating Islamic Halal food and maintaining physical fitness, this contract also dictates holiday arrangements, salaries and tickets, and rewards and punishments.[78] Shapiro notes that "groups as diverse as the RB, ETA, Aum Shinrikyo, Fatah, and Al Qaeda, generate organizational minutiae and paperwork that, were it not for their violent subject matter, could have come from any traditional organization." Terrorist organizations use these bureaucratic-type rules to deal with preference divergence and the resulting internal conflict within an organization.[79] It regulates behavior and facilitates coordination.[80] A strong level of formalization allows for institutional memory and increased accountability. It moderates the impact of the absence of predictable relationships.[81] The tactical, operational, and strategic command and control over an increased number of members, and operational space and time, improves by means of formalization. The production of effective violent output by the terrorist organization is more likely.

Yet, net advantages are curtailed by the inherent security problems related to strong levels of formalization. Written communication, standardized routines and explicitly defined roles are vulnerable targets for penetration by law enforcement agencies. Material and virtual communication modes can be easily intercepted. Well-defined behavioral patterns are susceptible to detection. For instance, intelligence services noted that the pattern of Al Qaeda activity indicating an attack had reached a crescendo before the 9/11 attacks. There were more than forty intelligence articles in the President's Daily Briefings from January 20 to September 10 that related to bin Laden.[82] Unfortunately, these security vulnerabilities were not exploited by law enforcement efforts. The CIA did exploit these type of security weaknesses in the killing of Osama bin Laden. This came about after national security officials zeroed in on bin Laden's courier, known as the "Kuwaiti." In an attempt to steer the organization and distribute communication to the local affiliates, bin Laden's courier unwittingly led them to the compound in Abbottabad.[83] Shapiro furthermore provides the example of the French police who captured a large cache of ETA documents at the Sokoa chair, 5 November 1986. These documents sketched a clear picture of ETA's internal organization. Spanish and French police used these documents to conduct a series of damaging raids on the organization.[84] These examples demonstrate that each instrument of formalization—although it adds to the command and control over the organization—simultaneously implies an organizational vulnerability. The organizational strength and survival is increasingly being jeopardized. The burden of the terrorist dilemma emerges with rising levels of formalization.

Centralization

Organization theorists define centralization as, "formal as well as informal measures with respect to the locus of authority to make decisions affecting the organization, and re-enforcement of these decision."[85] Three uses of the term (de)centralization can be identified: (1)

Vertical (de)centralization—which refers to the dispersal of formal power down the chain of line authority. (2) Horizontal (de)centralization—which refers to the extent to which non-managers (e.g., support services) control decision processes. (3) Geographical (de)centralization—which refers to the physical dispersal of services. A strongly centralized organization is the tightest means of rule-making and coordinating decision making. All decisions are made by one person.[86] This enables uncontested agenda-setting, a better flow of information, enhanced command and control mechanisms, and increased work specialization. On the other hand, a de-centralized structure can stimulate organizational flexibility and the intrinsic motivation of members.

Similar benefits are applicable to terrorist organizations. Vertical, horizontal, and geographical centralization imply increased accountability (through command and control mechanisms), enhanced flows of information, uncontested agenda-setting, and a stronger likelihood of functional differentiation between different units. Reducing the number of decision makers implies less distortion of goals and slippage, and a more clearly cut division of competences. Control over a growing pool of members is easier. This results in more effective scaling up or limiting of the violent output by the terrorist organization.[87] It is no coincidence that Al Qaeda, Hamas, Hezbollah, early Marxist factions as well as the RB all initially chose for a centralized, hierarchical organization.[88] A "lessons learned" document about the armed *jihad* in Syria articulates that: "due to the lack of strategic planning; decentralization became the mujahideen Achilles heel, each city managed its own battles with no strategy or coordination with the other cities, they were unable to wage coordinated and exhausting attacks on the enemy."[89] Likewise, Heger, Jung, and Wong refer to the consolidation and centralization of the ETA leadership as a significant variable leading to a rise in their lethality in the late 1970s.[90] Note, however, that decentralization might be more apt for complex and innovative (tactical) terrorist attacks. Although a clear division of competences, an enhanced information flow, and accountability remain important to ensure the strategic effectiveness of an attack,[91] decentralization enables the organization—or its subunits—to respond quickly to local conditions, and provide stimulus for individual motivation and team-work; organization theorists agree that creative and intelligent people require room to maneuver.[92] The 1995 Sarin attack by Aum Shinrikyo, for instance, could have been far more lethal. Their authoritarian and centralized management style did not allow for the use of technical expertise existing outside the inner circle, and lacked a clear system of checks and balances. Decision making was often based on the beliefs of its leaders (rather than science).[93]

Yet, the advantages of centralization come at a price. While it does enable better management of an increased number of members and operational space and time, close connections and accountability amplify the negative impact of any leaks, defections or detections (which are unavoidable). Penetration of the terrorist organization by law enforcement agencies can reach deeper. This compromises their organizational strength and survival. The Provisional Irish Republican Army's (PIRA) vulnerability increased when they tightened their organizational centralization. PIRA volunteer Raymond Gilmour—a low-level driver for his cell—became the ideal British informant due to his regular contacts with a wide range of PIRA members throughout Derry, a country home to PIRA controlled areas. In contrast, when loosening their centralization, they were able to recover from the capture of a high commander of the Belfast Brigade—Gerry Adams—in about a week.[94] Likewise, Aum Shinrikyo—a highly centralized group—received an organization-wide setback once their

headquarters were raided after the 1995 Sarin attack.[95] Decentralization, on the other hand, creates the conditions for individual members to defy the will of the organization's leaders. Preference divergence and uncertainty over the correct plan of action might emerge. See, for instance, the dispute between Zarqawi (Al Qaeda in Iraq) and Al Qaeda Core. An intercepted letter by Al Qaeda's spokesman Adam Gadahn strongly advocates for Al Qaeda to dissociate itself from Al Qaeda in Iraq because of their bad tactics and targeting calculus.[96] While it could be opportune for terrorist innovation—by means of operational flexibility and engagement—and survival of the organization, it does not necessarily lead to increased strategic political success. In general, thus, the urgency of the terrorist dilemma increases with growing levels of centralization.

The Joint Impact of the Organizational Design Parameters

The interesting question, obviously, is how these parameters coincide: How does the overall organizational design shape the nature and impact of the terrorist dilemma on the effective functioning of a terrorist organization? The final section of this article models the structural and structuring parameters on the "strategic success versus organizational security" axes, as illustrated by Figure 1. Before continuing, it is important to emphasize that the suggested model is a highly stylized and simplified way to represent reality: (1) this article identified two components within both the structural parameters (membership and operational space and time) and structuring parameters (formalization and centralization). The model, however, treats these parameters as one. Despite the differential impact of each component, the parameter values often go hand in hand. A large pool of well-trained and indoctrinated members is often only possible with substantial operational space and time, and vice versa. A strong level of formalization is often matched with a strong level of centralization, and vice versa. Yet, this is doing injustice to the complexities of daily reality. For reasons of analytical clarity, this article, however, does not account for smaller variations. (2) Terrorist organizations' design evolves over time, and they allocate their resources and activities

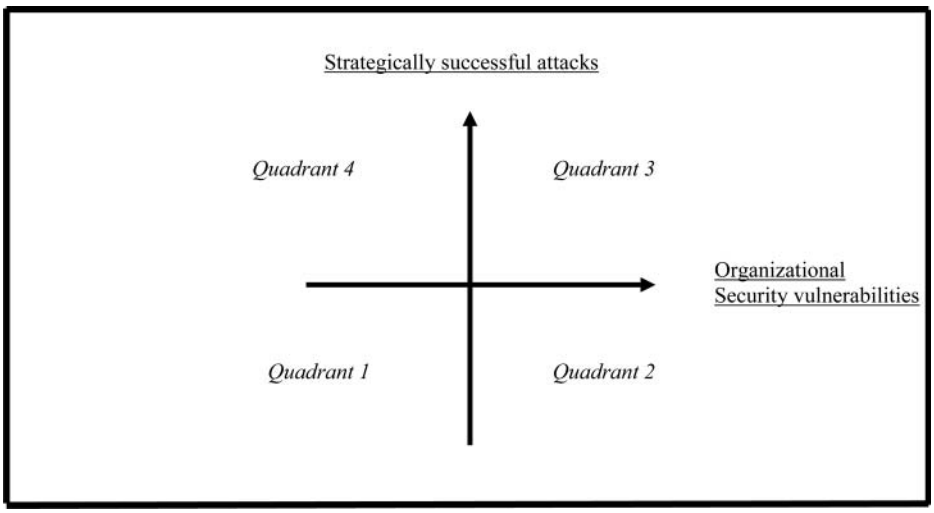

Figure 1. The joint impact of the organizational design parameters.

depending on the nature of its operational environment.[97] Individual terrorist organizations are a hybrid combination of the identified design parameters. The model merely represents ideal-types of organizational designs. Yet, it does suggest a number of useful insights into the growing line of inquiry that applies established organization theory to terrorism.

Quadrant 1 refers to a terrorist organization with both low structural parameters and low structuring parameters. They have a minimal level of well-trained and strongly indoctrinated members, and limited operational space and time. This type of organization is therefore less appropriate for complex terrorist acts, or strategically successful prolonged terrorist campaigns. Their tactical, operational and strategic capability—and the alignment between these levels—is low. On the other hand, there are low levels of formalization and centralization. Control and coordination is limited. This implies a low level of accountability, lacking functional specialization, and potential preference divergence— thereby reducing the organization's capability to achieve its strategic political objectives even more.[98] Yet, it also entails the inherent low probability of the terrorist organization being compromised by counterterrorism efforts. Detection and penetration of the group is hard. The Animal Liberation Front (ALF) is a good example of this type of terrorist organization. Membership is unofficial and vague. Based on the RAND-MIPT terrorism incident database, their numbers are estimated not to be more than a few dozen.[99] Individuals, or small groups, function more within a broader ideological movement.[100] They adopt a model of *leaderless resistance*. According to their own guidelines, they recommend activists to "work anonymously, either in small groups or individually, and do not have any centralized organization or coordination."[101] Although they have been active since the 1970s—indicating their long organizational survival—their mainly non-lethal attacks can hardly be considered to be a strategic success: their actions have led some companies to stop using animals for testing, and have made life more difficult for the fur industry. This indicates their potential for tactical, and short-term successes—depending on how high one sets the bar to perceive an action as successful. Yet, their long-term strategic goal to "end all animal suffering by forcing animal abuse companies out of business" is far from being achieved.[102] Thus, this type of terrorist organization steers clear of the terrorist dilemma: while avoiding security vulnerabilities, the chances that they achieve their strategic policy objectives are rather small. Counterterrorism terrorism effort should consign them a relative modest place in the range of threats posed by terrorist organizations.

Quadrant 2 refers to a terrorist organization with low structural parameters, but increasing structuring parameters. Their tactical, operational and strategic capability—and their alignment—remains relatively low. Yet, rising formalization and centralization enables better control over preference divergence, clear cut competences and goals, accountability, and specialization. It shapes improved conditions under which members can be recruited, trained, and indoctrinated, and allows for better use of the available operational space and time. In short, these more formal devices of structuring contribute to the successful transition of a terrorist organization. Martha Crenshaw, for instance, refers to the decentralized organizational structure as one of the explanatory variables why extremist right-wing organizations had often trouble with truly effective generational transition.[103] The lack of centralization (and formalization) hinders them to effectively organize. For instance, it complicates the articulation of a clear vision of their goals, which could be handed down to their successors (after arrest or elimination of the first generation). Cronin points to similar reasons for the unsuccessful generational transition of terrorist groups such as the RB, the Baader-Meinhof

group, and the Second of June movement.[104] Yet, these structuring parameters simultaneously cause emerging security deficiencies. As outlined throughout this article, detection and defection becomes more likely. Thus, this type of terrorist organization is increasingly facing the terrorist dilemma. More formalization and centralization— which would increase the likelihood of achieving their strategic political objectives—leads to more threats to their organizational strength and security. Counterterrorism efforts should exploit these security deficiencies before the terrorist organization can evolve into a substantial threat.

Quadrant 3 refers to a terrorist organization with both high structural parameters and structuring parameters. The group developed into a substantial strategic threat. Various positions within the terrorist organization—be it at the senior level, the supporting staff, or the operational core—are held by well-trained, indoctrinated individual terrorists, and the group is able to make use of sufficient relative secure physical areas to prepare and coordinate their attacks. In addition, these capabilities are amended by a high level of formalization and centralization. Functional specialization, accountability, and institutional memory is strengthened. Preference divergence and unclear task and competence allocation is reduced. Thus, tactical, operational and strategic capability is high. Al Qaeda pre-9/11 is a prime example of this type of organization. As Bruce Hoffman[105] wrote in a 2004 article in *Studies in Conflict and Terrorism*, "on the eve of 9/11, Al Qaeda was a unitary organization, assuming the dimensions of a lumbering bureaucracy." While the tactical success of 9/11 is self-explaining, it is hardly ever emphasized that it also was a perfect fit to Al Qaeda's broader 20-year political strategy. Known as "the awakening," this first phase of Al Qaeda's broad strategy—which lasted from 2000 to 2003—was precisely meant to provoke the United States into declaring war on the Islamic world.[106] A letter found after the raid in Abbottabad—most likely written by bin Laden himself—explains Al Qaeda's strategy of attrition: "To break away from America's hegemony, we need to involve America in a war of attrition. The war must be enduring, however. The goal is to weaken America until it can no longer interfere in Muslims affairs."[107] However, Hoffman simultaneously identifies the inherent security weaknesses of "that now-anachronistic version of Al-Qaeda." He argues that "Al-Qaeda had a clear, distinct center of gravity. … That structure was not only extremely vulnerable to the application of conventional military power, but played precisely to the American military's vast technological strengths."[108] While governmental agencies could not prevent 9/11, Al Qaeda was forced by counterterrorism efforts to stunningly transform from the more or less unitary bureaucracy, to something more akin to an amorphous movement.[109] Thus, although posing a substantial threat, the urgent nature and direct impact of the terrorist dilemma is a continuous, grave threat to the survival and power of the terrorist organization. The burden of the terrorist dilemma is at its highest for terrorist organizations in this quadrant.

Quadrant 4 refers to the *ideal* organizational design for any terrorist organization. Their strong structural capacities enforce the organization's tactical, operational, and strategic capability and resources. Well-trained, indoctrinated members can carry out complex operations and/or prolonged terrorist campaigns in line with the group's strategic political goals and their organizational objectives. Meanwhile, formalization and centralization is minimal. Security considerations are not as acute due to the little structuring tools to communicate and coordinate their actions. Although this *ideal* terrorist organization is close to surmounting the terrorist dilemma, it entails an inherent paradox. The lack of formal structuring devices implies reduced functional specialization, accountability and institutional memory. Thus,

diverging preferences and uncertainty over what to do is inevitable (although well-trained and indoctrinated members could moderate this to some extent). Their organizational capacity and control is increasingly jeopardized. Al Qaeda's contemporary organizational design is arguably the most alike this type of organization. Hoffman convincingly argues that they have a "deeper bench than has often been posited."[110] They can still replenish their decimated ranks with individuals with "tremendous credibility."[111] Moreover, he warns that the continued fragmentation of the *jihadi* movement "will raise difficulties in terms of identifying, tracking, anticipating, and predicting threats."[112] While Al Qaeda may have been "out of sync" with its local affiliate organizations on some occasions, it is disturbing, "to map the accuracy of Al Qaeda's strategic trajectory dating": After the "awakening-stage," they enervated the United States and the West in a series of prolonged overseas adventures, expanded to new venues of operations, tried to exploit toppled apostate regimes, and now aim to achieve the establishment of supra-national Islamic rule over large territorial grounds in the Muslim world.[113] A letter from—most likely—Osama bin Laden to the leader of Al Qaeda in the Arabian Peninsula (captured after the 2011 Abbottabad raid) captures their strategic plan: "the more we can conduct operations against America, the closer we get to uniting our efforts to establish an Islamic State, God willing."[114] It remains to be seen, however, if Al Qaeda can overcome the inherent problems with reduced control and coordination mechanisms. Today's strong rivalry between Al Qaeda and the Islamic State—in, for instance, their competition for affiliations—and the lack of major attacks at Western soil, seems to tentatively suggest they at least face some substantial problems.

Thus, to synthesize, assessing the organizational design parameters enables us to better understand the nature and impact of the terrorist dilemma on the effective functioning of a terrorist organization. Increasing structural parameters (membership and operational space and time) constitute the organizational context in which terrorist organizations are more appropriate to achieve their organizational and strategic political objectives. Yet, these growing structural parameters simultaneously put rising demands to the managerial control and coordination over the organization, which is necessary to achieve effective violence (i.e., a violent output that is beneficial to the organization's strategic political objectives). The structuring parameters—which provide the necessary means to control and coordinate the organization—however, inherently imply a threat to the organization's strength and survival. They lead to security vulnerabilities. The contradictory nature of the *ideal* terrorist organization—with consists of strong structural parameters, and low structuring parameters— seems to be the ultimate exponent of this effectiveness paradox that each terrorist organization faces.

Conclusion

Looking into the way the organizational design shapes the nature and impact of the terrorist dilemma is challenging. The organizational design cannot be treated as a fully exogenous independent variable, and other variables can also influence the nature and impact of this critical tradeoff between executing successful terrorist attacks while simultaneously remaining secure and relevant: for example, their specific strategic political goals, how discriminate a terrorist organization needs to be to achieve these goals, and/or the level of law enforcement activity and counterterrorism efforts.[115]

This does not, however, take away the role of the organizational design as a critical independent variable in the way that terrorist organizations experience the terrorist dilemma. The organizational design has been presented as, "levers that can be pulled and knobs that can be turned to affect the division of labor and the coordination of tasks in the organization." Building on organizational theory and terrorism literature, this article identified the structural parameters *membership* and *operational space and time*, and the structuring parameters *formalization* and *centralization*. After elaborating on the unique and joint impact of the individual design parameters, it became clear that structural parameters can lead to strengthened tactical, operational, and strategic capability. Yet, the net advantages are proportionally being curtailed by emerging strength and security risks. In order to effectively control and coordinate increasing structural parameters, the terrorist organization will need more structures of formalization and centralization. The security risks related to these control and coordination tools bring the terrorist dilemma actually into life.

The exact values of the design parameters can provide guidelines for counterterrorism strategies. It is clear that a one-size-fits-all policy will not work. Proactive, well-considered counterterrorism efforts are necessary. First, a terrorist organization with low structural and structuring parameters can be considered to be steering away from the terrorist dilemma. These groups are less appropriate to achieve their strategic objectives. Counterterrorism strategies should avoid any overreaction to this threat—even despite the occasional successful tactical terrorist attack—as it can enable the terrorist organization to reduce preference divergence and recruit more members. It is of paramount importance that measures that reduce the incentives to participate in terrorism are emphasized in order to compromise the survival of the organization. Some potential measures are: providing valid exit-options for individual terrorists, holding back from any action which can align the terrorists' preferences, and indicating the inutility of their terrorist actions for their strategic political goals. Moreover, it is important to acknowledge that this type of organization will need to put in more effort to prepare a (tactical) terrorist attack. The perpetrators carrying out the attack lack the advantage of preexisting resources, information-sharing, functional specialization, and clear mutual task-adjustment. Counterterrorism efforts should simultaneously focus on these increased preparatory costs. Law enforcement agencies can, for instance, more actively track people's information searches, plant false information, and increase security awareness around potential high-end targets.[116] Second, increased structural and (hence) structuring parameters lead to the rising urgency of the terrorist dilemma. While the aforementioned counterterrorism efforts remain important, emphasis should go to exploiting the command and control vulnerabilities of a terrorist organization. Deny them the organizational advantages (pooled resources, information-sharing, specialization, etc.) enabled by stronger structuring parameters. A few potential measures to undermine their organizational strength, and hence also the likelihood that they achieve their strategic political goals, are: cracking down on terrorist organization's financial channels, deploying infiltrators in the terrorist organization, pro-actively screening of terrorist activity, and battling the terrorist organization's relative secure areas. These measures can disrupt the effective functioning of the terrorist organization. Third, organizations with increased structural parameters and low structuring parameters seem to be close to surmount the terrorist dilemma. These groups—which are unlikely to easily arise due to the inherent contradiction they face—pose the biggest challenge to counterterrorism efforts. While previously mentioned measures remain important, it is important to address the tools that ensure the coherence of these groups

(e.g., ideology can be addressed by counternarratives) when confronted by this type of organization. Moreover, it is important to exploit the lack of formalized and centralized control. Install measures that create preference divergence and uncertainty over the course of action that the members of these organizations should take.

However, for now, qualifications to these findings and policy recommendations should be treated carefully. This theoretical article only used illustrative empirical examples. It needs to be followed by actual tests about the organizational effectiveness of terrorist organizations, and the impact of their organizational design. This unfortunately falls out of the scope and purpose of this article. Yet, when being tested in future research, it needs to be clear what is understood as an effective organization. Defining effectiveness based on the strategic success of the organization's violent output, or based on the survival of the organization, leads to different conclusions. Valid empirical testing of this model needs to take into account both perspectives in order to assess implications for threat assessments and effective counterterrorism efforts.

Notes

1. Henry Mintzberg, introduction to *Structure in Fives: Designing Effective Organizations* (Upper Saddle River, NJ: Prentice-Hall, 1983), p. v.

2. These 5 types are: (1) a simple structure, (2) a machine bureaucracy, (3) a professional bureaucracy, (4) a divisionalized form, and (5) an adhocracy. Please see Mintzberg's work for more information.

3. Mintzberg, Introduction to Structure in Fives, p. 2.

4. Ibid., p. 22. Mintzberg identifies nine parameters of any organization's design. Yet, building on terrorism literature (e.g., Jacob Shapiro, *The Terrorist's Dilemma: Managing Violent Covert Organization* (Princeton, NJ: Princeton University Press, 2013); Eli Berman, *Radical, Religious and Violent: The New Economics of Terrorism* (Cambridge: MIT Press, 2009); Brian Jackson, "Groups, Networks, or Movements: A Command-and-Control-Driven Approach to Classifying Terrorist Organizations and Its Application to Al Qaeda," *Studies in Conflict and Terrorism* 29(3) (2006), pp. 241–262, doi:10.1080/10576100600564042; Brian Jackson and David Frelinger, "Understanding Why Terrorist Operations Succeed or Fail" (Santa Monica, CA: RAND Corporation, 2009). Available at http://www.rand.org/content/dam/rand/pubs/occasional_papers/2009/RAND_OP257.pdf (accessed 15 March 2015); Victor Asal and Karl Rethemeyer, "The Nature of the Beast: Terrorist: The Organizational and Network Characteristics of Organizational Lethality," *Journal of Politics* 70(2) (2008), pp. 437–449, doi:http://dx.doi.org/10.1017/S0022381608080419; Ekaterina Stepanova, "Terrorism in Asymmetrical Conflict: Ideological and Structural Aspects" (SIPRI, 2008). Available at http://books.sipri.org/files/RR/SIPRIRR23.pdf (accessed 17 March 2015); Kim Cragin and Sara Daly, "The Dynamic Terrorist Threat: An Assessment of Group Motivation and Capabilities in a Changing World" (Santa Monica, CA: RAND Corporation, 2004)) and organizational literature (e.g., Gareth Morgan, *Images of Organization* (Thousand Oaks, CA: SAGE Publications, 1986); Lawrence James and Allan Jones, "Organizational Structure: A Review of Structural Dimensions and Their Conceptual Relationships with Individual Attitudes and Behavior," *Organizational Behavior and Human Performance* 16 (1976), pp. 74–113; Dan Dalton et al., "Organization Structure and Performance: A Critical Review," *The Academy of Management Review* 5(1) (1980), pp. 49–64), this article identified four design parameters of particular importance for terrorist organizations. These overlap to some extent with the parameters identified by Mintzberg.

5. Peter Blau and Richard Scott, *Formal Organizations: A Comparative Approach* (Oxford: Chandler, 1962); John Child, "Predicting and Understanding Organization Structure," *Administrative Science Quarterly*, 18 (2) (1973), pp. 168–185; Morgan, *Images of Organization*.

6. Renate Mayntz, "Organizational Forms of Terrorism: Hierarchy, Network, or Type Sui Generis" (Max Planck Institute for the Study of Societies, 2004). Available at http://www.mpi-fg-koeln.mpg.de/

pu/mpifg_dp/dp04-4.pdf (accessed 17 March 2015), p. 5. Note that the term "illegal" can be subjectively interpreted. Terrorist organization theirselves will argue that they pursue a legal cause.

7. Martha Crenshaw, "Terrorism Research: The Record," *International Interactions: Empirical and Theoretical Research in International Relations* 40(4) (2014), p. 562. doi:10.1080/03050629.2014.902817

8. This idea has also been suggested by Martha Crenshaw during a panel session at the WestPoint Center for Combating Terrorism (2014).

9. Magnus Ranstorp, "Mapping Terrorism Studies after 9/11: An Academic Field of Old Problems and New Prospects," in Richard Jackson, Marie Breen Smyth, and Jeroen Gunning, eds.,*Critical Terrorism Studies: A New Research Agenda* (New York: Routledge, 2009), p. 18.

10. Martha Crenshaw, "The Logic of Terrorism: Terrorist Behavior as a Product of Strategic Choice," in Walter Reich, ed., *Origins of Terrorism: Psychologies, Ideologies, Theologies, State of Mind* (Baltimore, MD: John Hopkins University Press, 1998), p. 8.

11. Max Abrahms, "What Terrorists Really Want: Terrorist Motives and Counterterrorism Strategies," *International Security* 32(4) (2008), p. 79.

12. Various other authors adopt this strategic approach (e.g., Peter Neumann and M. L. R. Smith, *The Strategy of Terrorism: How It Works, and Why It Fails* (London: Routledge, 2007); Christopher Harmon, *Terrorism Today*, 2nd ed. (London: Routledge, 2008); Andrew Kydd and Barbara Walter, "The Strategies of Terrorism," *International Security* 31(1) (2006), pp. 49–80). Yet, we also acknowledge the importance of further research in the psychological and social approach. As Crenshaw argues, both poles, "must be recognized as delimiting the boundaries of an exploratory analysis." Crenshaw, "The Logic of Terrorism," p. 7.

13. Harmon, *Terrorism Today*, p. 39.

14. David Lonsdale, *Alexander the Great: Lessons in Strategy* (London: Routledge, 2007), p. 6.

15. Audrey Kurth Cronin, *How Terrorism Ends: Understanding the Decline and Demise of Terrorist Campaigns* (Princeton, NJ: Princeton University Press, 2009), p. 77.

16. Ibid., p. 7.

17. Peter Krause, "The Political Effectiveness of Non-State Violence: A Two-Level Framework to Transform a Deceptive Debate," *Security Studies* 22(2) (2013), pp. 259–294. doi:10.1080/09636412.2013.786914

18. Ibid., p. 270

19. Audrey Kurth Cronin, *How Terrorism Ends*, p. 75.

20. Peter Krause, "The Political Effectiveness of Non-State Violence," p. 261.

21. The second type of organizational goals is often instrumental in reaching the political objectives of the organization. Yet, both types of goals are different in nature. Political objectives are more externally oriented. Organizational objectives are more internally oriented.

22. In addition, it could be argued that it also fits their political goal to consolidate the Islamic Caliphate. It deters opponents by means of psychological warfare. One act of terrorism can serve both types of collective preferences. I furthermore refer to Patrick Henry's detailed analysis of the James Foley beheading to demonstrate the rationality of these beheadings: Patrick Henry, "The James Foley Beheading," *Aegis Academy*, 20 August 2014. Available at http://aegisacademy.com/community/james-foley-beheading/ (accessed 10 February 2015).

23. Abu Bakr Naji (translated by William McCants), "The Management of Savagery." Available at https://azelin.files.wordpress.com/2010/08/abu-bakr-naji-the-management-of-savagery-the-most-critical-stage-through-which-the-umma-will-pass.pdf (accessed 10 August 2015).

24. Harmony Database (object name AFGP-2002-600080). Available at https://www.ctc.usma.edu/wp-content/uploads/2010/08/AFGP-2002-600080-Trans.pdf (accessed 27 February 2015).

25. Crenshaw, "Terrorism Research," 562.

26. Michael Kenney, *From Pablo to Osama: Trafficking and Terrorist Networks, Government Bureaucracies, and Competitive Adaptation* (Philadelphia, PA: n, 2007).

27. Berman, *Radical, Religious, and Violent*.

28. Shapiro, *The Terrorist Dilemma*.

29. John Campbell et al., *The Measurement of Organizational Effectiveness: A Review of Relevant Research and Opinion* (San Diego, CA: Navy Personnel Research and Development Center, 1974), p. 192.
30. Ibid., cited in Dalton et al., "Organization Structure and Performance," p. 51.
31. Brian Jackson, "Groups, Networks, or Movements," p. 241. Typologies of terror and terrorist organizations can emphasize different factors to distinguish between organizations. For instance: intended target of the organization, the motivation of the organization, the area under control of the organization, the organization's financial means, and so on. One of these particular factors to categorize terrorist organizations is the "organization's structure." The article starts from this perspective to define a *terrorist organization*.
32. Shaul Mishal and Maoz Rosenthal, "Al Qaeda as a Dune Organization: Toward a Typology of Islamic Terrorist Organizations," *Studies in Conflict & Terrorism* 28(4) (2005), pp. 275–293.
33. Brian Jackson, "Groups, Networks, or Movements."
34. Joshua Kilberg, "A Basic Model Explaining Terrorist Group Organizational Structure," *Studies in Conflict & Terrorism* 35(11) (2012), pp. 810–830.
35. Ahrne Goran and Nils Brunsson, "Organization Outside Organizations: The Significance of Partial Organization," *Organization* 18 (83) (2011), p. 84.
36. Seth Jones and Martin Libicki, "How Terrorist Groups End: Lessons for Countering Al Qa'ida" (Santa Monica, CA: RAND Corporation, 2008), p. 3.
37. Shapiro, *The Terrorist Dilemma*.
38. Ibid., 4.
39. Bruce Don et al., "Network Technologies for Networked Terrorists: Assessing the Value of Information and Communication Technologies to Modern Terrorist Organizations" (Santa Monica, CA: RAND Corporation, 2007), http://www.rand.org/content/dam/rand/pubs/technical_reports/2007/RAND_TR454.pdf (accessed 3 March 2015), pp. 55–57.
40. Shapiro, *The Terrorist Dilemma*, p. 3.
41. John Campbell, et al., *The Measurement of Organizational Effectiveness*, p. 192.
42. Mintzberg, *Structure in Fives*, p. 39.
43. Note that Mintzberg also includes the formalization of behavior as an important dimension within this parameter. This article treats this as an individual parameter due to the specific impact of this dimension in case of a terrorist organization. They are clandestine organizations. Formalization is a direct risk to the security of a terrorist organization.
44. Shapiro, *The Terrorist Dilemma*.
45. Daniel Metraux, "Religious Terrorism in Japan: The Fatal Appeal of Aum Shinrikyo," *Asian Survey* 35(12) (1995), p. 1140.
46. Tim Ballard et al., "Chronology of Aum Shinrikyo's CBW Activities" (Monterey, CA: Monterey Institute for International Studies, 2001).Available at http://cns.miis.edu/reports/pdfs/aum_chrn.pdf (accessed 14 March 2015).
47. Note that these scientists were not necessarily attracted by the religious believes of the cult. It could also have been to further their own scientific careers. Yet, important is the fact that they acquired the organizational norms. Some (e.g., Metraux, "Religious Terrorism in Japan") blame the dogmatic Japanese educational system to train students not to think independent and critically. They did not distinguish between a true spiritual leader, or a murderous madman.
48. Magnus Ranstorp, "The Hizballah Training Camps in Lebanon," in James Forest, ed., *The Making of a Terrorist: Training* (Westport, CT: Praeger, 2005), p. 261.
49. Assaf Moghadam, "Palestinian Suicide Terrorism in the Second Intifada: Motivations and Organizational Aspects," *Studies in Conflict & Terrorism* 26(2) (2003), p. 83.
50. Cragin and Daly, "The Dynamic Terrorist Threat," p. 34.
51. Bruce Hoffman, "Al Qaeda's Uncertain Future," *Studies in Conflict and Terrorism* 36(8) (2013), p. 639. doi:10.1080/1057610X.2013.802973
52. William Braniff, "Discussion Point: The State of Al-Qaida, its Affiliates and Associated Groups" (House Armed Services Committee testimony, 2014). Available at http://www.start.umd.edu/news/discussion-point-state-al-qaida-its-affiliates-and-associated-groups (accessed 10 February 2015).

53. Catherine Theohary and John Rollins, "Terrorist Use of the Internet: Information Operations in Cyberspace" (Congressional Research Service, 2011). Available at http://fas.org/sgp/crs/terror/R41674.pdf (accessed 15 January 2015).
54. Note that Scott Helfstein ("Governance of Terror: New Institutionalism and the Evolution of Terrorist Organizations," *Public Administration Review* 69(4) (2009), pp. 727–739) correctly acknowledges that the impact of detection or defection may be limited if the organization has made little investment in that specific individual. The detection or defection of well-placed or highly trained individuals might be more costly.
55. Cragin and Daly, "The Dynamic Terrorist Threat," p. 41.
56. Sonia Ouagrham-Gormley, "Barriers to Bioweapons: Intangible Obstacles to Proliferation," *International Security* 36(4) (2012), p. 100.
57. Abu Bakr Naji (translated by William McCants), "The Management of Savagery." Available at https://azelin.files.wordpress.com/2010/08/abu-bakr-naji-the-management-of-savagery-the-most-critical-stage-through-which-the-umma-will-pass.pdf (accessed 10 August 2015), p. 67.
58. Strong and good leaders can, for instance, make better choices when it comes to choosing the right weapons, allocating financial and material resources, correct number of operatives, and so on.
59. Morgan, *Images of Organization*, p. 49.
60. Asal and Rethemeyer, "The Nature of the Beast"; Cragin and Daly, "The Dynamic Terrorist Threat."
61. "Countries Report on Terrorism" (U.S. Department of State, 2013), p. 236. Available at http://www.state.gov/j/ct/rls/crt/2013/ (accessed on 17 March 2015).
62. Elizabeth Arsenault and Tricia Bacon, "Disaggregating and Defeating Terrorist Safe Havens," *Studies in Conflict & Development* 38 (2) (2015), pp. 87–88.
63. Arsenault and Bacon, "Disaggregating and Defeating Terrorist Safe Havens," p. 88.
64. Ibid., p. 86.
65. Otto Billig, "The Lawyer Terrorist and His Comrades," *Political Psychology* 6(1) (1985), pp. 29–46; Stefan Aust, *The Baader-Meinhof Group: The Inside Story of a Phenomenon*. Translated by Anthea Bell (London: The Bodley Head, 1985); Cragin and Daly, "The Dynamic Terrorist Threat."
66. Note that this refers to both the physical as well as virtual space. Internet interaction is at least to a similar extent—or even more—susceptible to law enforcement penetration.
67. Letter of Abbottabad (object name SOCOM 15; accessed 2 August 2015), p. 1.
68. National Commission on Terrorist Attacks upon the United States (Philip Zelikow, Executive Director; Bonnie D. Jenkins, Counsel; Ernest R. May, Senior Advisor), The 9/11 Commission Report (New York: W.W. Norton & Company, 2012), p. 168.
69. Ibid., p. 234.
70. The perpetrators were Ramzi Yoesef, Wali Khan Amin Shah, and Abdul Hakim Murad. KSM was also included in the planning of this plot.
71. "Underlying Reasons for Success and Failure of Terrorist Attacks: Selected Cases" (Homeland Security Institute, 2007). Available at http://www.dtic.mil/dtic/tr/fulltext/u2/a494447.pdf (accessed 15 February 2015).
72. Arsenault and Bacon, "Disaggregating and Defeating Terrorist Safe Havens," p. 91.
73. James and Jones, "Organizational Structure," p. 80.
74. Mintzberg, *Structure in Fives: Designing Effective Organizations*, pp. 33–39.
75. Ibid., p. 34.
76. Harmony Database (object name AFGP-2002-000078). Available at https://www.ctc.usma.edu/wp-content/uploads/2010/08/AFGP-2002-000078-Trans.pdf (accessed 15 February 2015).
77. Shapiro, *The Terrorist Dilemma*, p. 96. Shapiro refers specifically to particular documents of the "Sinjar documents." namely object name NMEC-2007-657961 and object name NMEC-2007-657964. These documents are, to the best of my knowledge, not translated in English. Yet, Shapiro clarifies that these documents refer to so-called martyrdom pledges, which indicate their commitment to commit a suicide attack.
78. Harmony Database (object name AFGP-2002-600045). Available at https://www.ctc.usma.edu/wp-content/uploads/2010/08/AFGP-2002-600045-Trans.pdf (accessed 17 March 2015).

79. Jacob Shapiro, "Bureaucracy and Control in Terrorist Organizations" (Columbia University International Politics Seminar, Columbia, 2008), p. 46. Available at http://www.princeton.edu/jns/papers/Shapiro_Bureaucracy_Control_Terrorism_2.pdf (accessed 20 February 2015).
80. Mintzberg, *Structure in Fives*.
81. Shapiro, *The Terrorist Dilemma*, p. 113.
82. National Commission on Terrorist Attacks upon the United States (Philip Zelikow, Executive Director; Bonnie D. Jenkins, Counsel; Ernest R. May, Senior Advisor), The 9/11 Commission Report, , p. 254.
83. Peter Bergen, *The Manhunt: The 10-Year Search for Bin laden from 9/11 to Abbottabad* (New York: Crown Publishers, 2012).
84. Jacob Shapiro and Aaron Siegel, "Moral Hazard, Discipline, and the Management of Terrorist Organizations," *World Politics* 64 (2012), p. 42.
85. James and Jones, "Organizational Structure," p. 80.
86. Mintzberg, *Structure in Fives*, p. 99.
87. Lindsay Heger, Danielle Jung, and Wendy Wong, "Organizing for Resistance: How Group Structure Impacts the Character of Violence," *Terrorism and Political Violence* 24(5) (2012). doi:10.1080/09546553.2011.642908
88. Jacob Shapiro, "Organizing Terror: Hierarchy and Networks in Covert Organizations," 2005. Available at http://www.teachingterror.net/resources/Shapiro%20organizing%20Terror.pdf (accessed 23 February 2015), p. 15.
89. Harmony Database (object name AFGP-2002-600080). Available at https://www.ctc.usma.edu/wp-content/uploads/2010/08/AFGP-2002-600080-Trans.pdf (accessed 27 February 2015).
90. Heger, Jung, and Wong, "Organizing for Resistance," p. 758. This example serves to illustrate that they have better control over their violent output. It does not want to suggest that increased lethality equals a more effective organization.
91. Accountability refers here more to the result-oriented accountability, rather than process-oriented accountability.
92. Mintzberg, *Structure in Fives*.
93. "Global Proliferation of Weapons of Mass Destruction: A Case Study on the Aum Shinrikyo" (Senate Government Affairs Permanent Subcommittee on Investigations 1995). Available at http://www.fas.org/irp/congress/1995_rpt/aum/part04.htm (accessed 12 March 2015).
94. Blake Mobley, "Terrorist Group Counterintelligence" (Ph.D. diss., Georgetown University, 2008) Available at https://repository.library.georgetown.edu/bitstream/handle/10822/553096/mobleyBlake.pdf?sequence=1 (accessed 18 March 2015), p. 96.
95. Ibid., p. 79.
96. Letter of Abbottabad (object name SOCOM 04; accessed 2 August 2015).
97. Think about for instance counterterrorism measures, shifts in ideology or leadership, fractionalization, competition with other groups, and so on.
98. Note that small groups can, however, reach a higher level of effectiveness by mutual adjustment between its members and direct supervision by its leader. Although this demonstrates the stylized character of the model, it does not undermine the main argument. This slightly higher level of effectiveness does not entail that they will achieve their strategic political objectives.
99. Based on Jones and Libicki, "How Terrorist Groups End," p. 146.
100. Brian Jackson, "Aptitude for Destruction: Volume 1: Organizational Learning in Terrorist Groups and Its Implications for Combating Terrorism" (Santa Monica, CA: RAND Corporation, 2005), p. 4. Available at http://www.rand.org/content/dam/rand/pubs/monographs/2005/RAND_MG332.pdf (accessed 9 March 2015).
101. Animal Liberation Front, "The ALF Credo and Guidelines." Available at http://www.animalliberationfront.com/ALFront/alf_credo.htm (accessed 10 August 2015).
102. Ibid.
103. Martha Crenshaw, cited in Jones and Libicki, "How Terrorist Groups End," p. 16.
104. Audrey Kurth Cronin, "How al-Qaida Ends: The Decline and Demise of Terrorist Groups," *International Security* 31(1) (2006), p. 23.

105. Bruce Hoffman, "The Changing Face of Al Qaeda and the Global War on Terrorism," Studies in Conflict and Terrorism 27(6) (2010), p. 551. doi:10.1080/10576100490519813
106. Bill Roggio, "The Seven Phases of the Base" (*The Long War Journal*, 2005). Available at http://www.longwarjournal.org/archives/2005/08/the_seven_phase.php (accessed 15 March 2015).
107. Letter of Abbottabad (object name SOCOM 17; accessed 2 August 2015).
108. Hoffman, "The Changing Face of Al Qaeda," p. 552.
109. Ibid., 551.
110. Hoffman, "Al Qaeda's Uncertain Future," p. 641.
111. Bruce Hoffman, "Al Qaeda's Playbook: Persistence towards the Caliphate" (Insite blog on terrorism and extremism, 2014). Available at http://news.siteintelgroup.com/blog/index.php/entry/229-al-qaeda%E2%80%99s-playbook-persistence-toward-the-caliphate (accessed 17 March 2015).
112. Hoffman, "Al Qaeda's Uncertain Future," p. 647.
113. Hoffman, "Al Qaeda's Playbook: Persistence towards the Caliphate."
114. Letter of Abbottabad (object name SOCOM 16; accessed 11 August 2015).
115. Shapiro, *The Terrorist Dilemma*, p. 57.
116. These guidelines are consistent with Scott Helfstein's suggestions (Scott Helfstein, "Governance of Terror"). He elaborates on the different costs that terrorist groups face, and builds on organizational theory to explain both leaderless *Jihad* and increased bureaucratization.