



The Jihadi Industry: Assessing the Organizational, Leadership, and Cyber Profiles

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About This Report

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About START

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Executive Summary

The Leadership of the Extreme and Dangerous for Innovative Results (LEADIR) project, funded by DHS S&T OUP since 2010, uses a longitudinal, industrial and organizational (I/O) psychology approach to assess organizational features in relation to their capacity for innovative and violent performance. The scope of the present effort is to use the LEADIR database and an internal strategic organizational approach to gain insight into 10 different violent extremist organizations (VEO) with a foothold in the current “Jihadi Industry.” In addition, a VRIO¹ analysis was performed to assess each VEO’s unique set of strategic resources (e.g., cyber infrastructure) and capabilities (e.g., attack innovation) that provide a competitive advantage among their industry peers. *When examining 10 VEOs in the Jihadi Industry, what are the features that differentiate them?*

This report, commissioned by the National Consortium for the Study of Terrorism and Responses to Terrorism (START), seeks to address this question by examining a sample of 10 active jihadi organizations through December 31, 2015. Drawing on longitudinal data analytics, organizational science literature, and computer science techniques, this report provides a picture of key organizations operating in the Jihadi Industry.

Table A. VRIO of 10 VEOs. (red = differentiating resource; green = lowest differentiating resource).

VRIO Strategic Differentiators of Ten Groups					
Marketing and Branding	Human Capital and Recruitment	Fundraising	Tactical Innovation	Cyber Sophistication	Cyber Interactivity
Da'esh	Da'esh	Da'esh	Da'esh	Da'esh	Da'esh
AQAP	AQAP	AQAP	AQAP	AQAP	AQAP
AQIM	AQIM	AQIM	AQIM	AQIM	AQIM
ASG	ASG	ASG	ASG	ASG	ASG
Al-Shabaab	Al-Shabaab	Al-Shabaab	Al-Shabaab	Al-Shabaab	Al-Shabaab
Taliban	Taliban	Taliban	Taliban	Taliban	Taliban
LeT	LeT	LeT	LeT	LeT	LeT
Jabhat	Jabhat	Jabhat	Jabhat	Jabhat	Jabhat
TTP	TTP	TTP	TTP	TTP	TTP
Boko Haram	Boko Haram	Boko Haram	Boko Haram	Boko Haram	Boko Haram

The report’s main findings indicate that leadership, organizational structure, and innovation vary across the Jihadi Industry, which has implications for how government resources should be allocated for monitoring and analysis. In addition, the findings highlight the need for additional research to determine advanced indicator and warning signals of which groups will emerge as the most strategically differentiated and capable of malevolent innovation in coming years.

¹ A VRIO analysis is an acronym for a four-question framework used to determine the competitive potential of a resource or capability within a larger industry; Specifically, this framework assess whether a resource or capability is Valuable, Rare, easy/difficult to Imitate, and susceptible to exploitation by Organization.

Contributions

1. **Da'esh leads the Jihadi Industry in all performance metrics, but they have been significantly degraded since 2014.**

Da'esh outperformed each VEO in the present sample of the Jihadi Industry. However, since our last assessment of their human capital in 2014, the quality of leader talent and innovation of attack sophistication have diminished.

2. **We developed a method to gather, quantify, and compare VEO cyber sophistication and social media interactivity, and this custom method statistically differentiated the 10 VEOs in our sample.**

Most of the research to date on VEOs' use of cyber has focused solely on descriptions of use of publicly-available social media platforms (e.g., Twitter, YouTube) or encrypted forums. Our contribution is that we systematically analyzed what cyber innovation means in the Jihadi Industry by assessing the underlying behaviors facilitated by their use of an array of platforms and web-based features.

3. **Top management team conflicts are related to lower organizational capabilities and less innovation.**

The clearest example of this in our dataset is that of the Afghan Taliban, who should be poised for high levels of performance given their strategic location, third party endorsement by al-Qaida Central leaders, and organizational age. Despite these resources, infighting among leaders and lack of clear leadership mission has resulted in a less capable organization. Conversely, organizations such as Jabhat Fateh al-Sham and Da'esh gain strength under the stewardship of a mix of pragmatic and ideological leaders working collaboratively toward organizational goals.

Recommendations for Policy

1. **Monitor AQAP's rebranding efforts in Yemen, as well as their outreach to Foreign Terrorist Fighters abroad.**

Al-Qa'ida in the Arabian Peninsula (AQAP) has been the most capable AQ branch, and its marketing efforts indicate a pivot to focus on the social services and the resilience of its organizational structure despite leader losses. Given the nexus of the state-sponsored groups, failed/fragile states markers, and crime-laden territory of Yemen, this group is poised for a re-emergence by all indicators. In addition, the high degree of social interactivity on various AQAP cyber platforms raises warnings for their potential outreach to those capable of executing large-scale attacks.

2. **Focus strategic communication efforts and operational planning to denigrate VEO leadership.**

Success from efforts to degrade the Da'esh organization should highlight at least one practice to continue and increase: leadership targeting. While leadership targeting has mixed results, VEOs in our sample with the strongest cadre of leaders and a collaborative leadership team also have most sophisticated attacks, cyber presence, and fundraising portfolio. Rather than focusing on the capacity of any one individual in a leadership position, it's critical that policy makers focus strategic communications and planning on disrupting the organizational dynamics afforded by an adversary's diverse and collaborative leadership team.

Introduction

This report examines 10 groups in the current Jihadi Industry using unclassified primary and secondary sources. Drawing from a team with diverse academic expertise, we use literature from organizational psychology, organizational strategy, and marketing/branding. Figure 1 outlines the overall flow of this project.

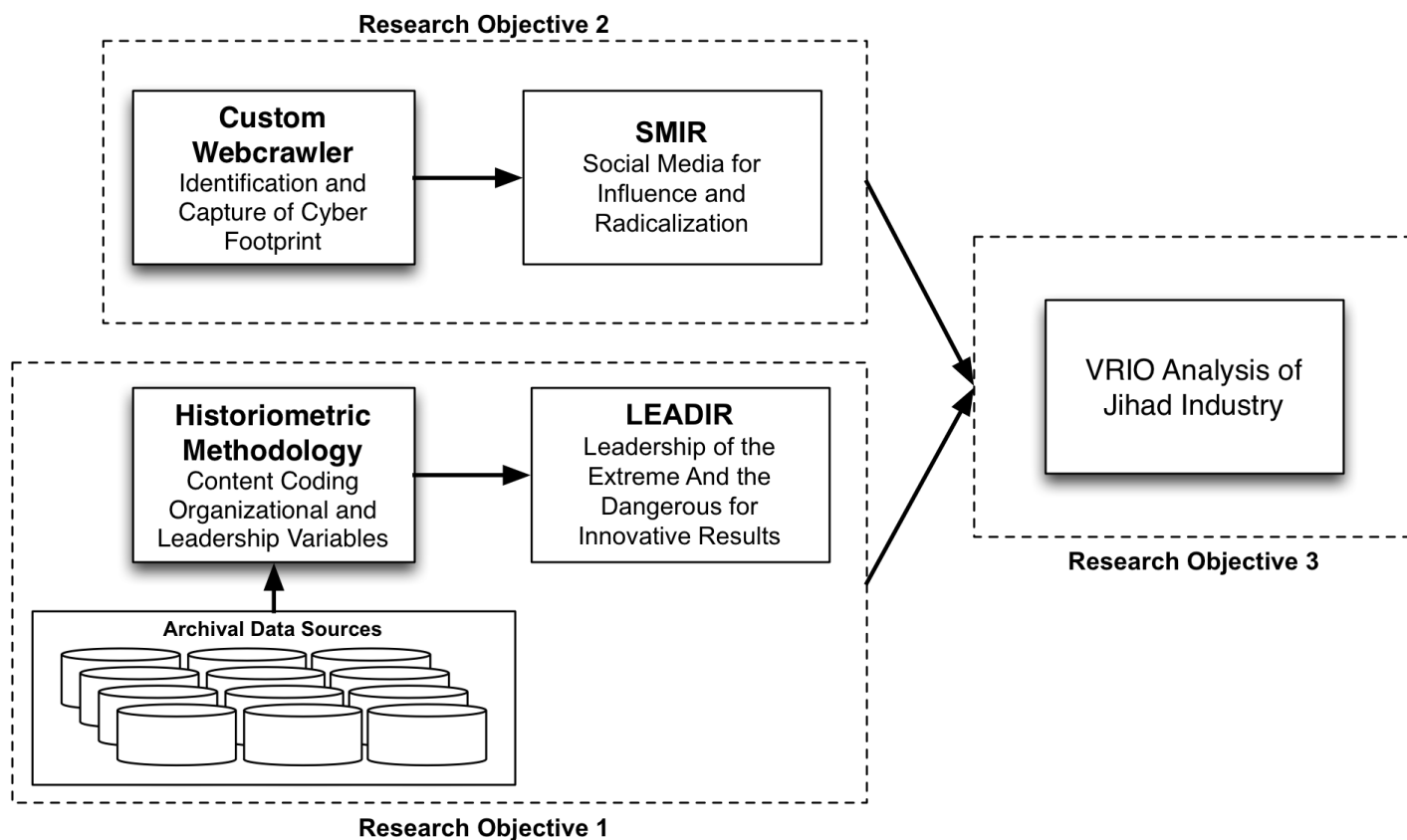


Figure 1. Overview of research methodology and project objectives.

To assess the 10 VEOs in our current sample, we developed unique methodologies for each of the three research objectives denoted in Figure 1. First, we employed organizational theory coupled with the LEADIR dataset to analyze and diagnose each VEO's organizational and leadership structure as well as their capacity for performance in terms of recruitment, fundraising, and attacks. In turn, this organizational analysis outlines the pressures and opportunities each group faces in the Jihadi Industry. Second, we assess the cyber sophistication and capabilities of each group using a proprietary web-crawler developed at the University of Nebraska Omaha. Given that VEOs' online presence plays a significant role in communicating with a global audience, understanding these dynamics is important.² In addition, we also examine the types of content within a subsample of 700 non-indexed, transient webpages. The online marketing campaign of VEOs are complex and used to "attract potential recruits, raise money, promote the image of the organization, or just spread fear among its enemies."³ Thus, in this

² Ligon, G. S., Harms, M., & Derrick, D. C. (2015), Lethal Brands: How VEOs Build Reputations, *Journal of Strategic Security* 8(1), 27-42. Doi: 10.5038/1955-0472.8.1.1436; Zelin, A. Y. (2014). Picture or It Didn't Happen: A Snapshot of the Islamic State's Official Media Output. *Perspectives on Terrorism* 9(4); Ingram, H. J. (2014). Three Traits of the Islamic State's Information Warfare. *The RUSI Journal* 159(6), 4-11. doi: 10.1080/03071847.2014.990810.

³ Barrett, R. (2014) "The Islamic State," *The Soufan Group*, p. 53.

effort, we evaluate the amount and types of content disseminated by organizations in the Jihadi Industry. Last, we performed a VRIO (Value, Rare, Imitable, and Organization) analysis to compare and contrast the strategic resources and capabilities leveraged across the Jihadi Industry. We now turn to an overview of the methods used to gather and analyze data about each of these three research goals.

Methodology

Overview

This project employed a historiometric methodology in order to evaluate the strategic and comparative threat posed by VEOs within the Jihadi Industry. Following the steps described by Ligon and colleagues,⁴ we defined the sample that would provide the best comparative attributes to evaluate some of the most prominent VEOs within the larger framework of high threat VEOs. After identifying the sample, we gathered data from primary and secondary sources, evaluated the organizations in our sample using the LEADIR (Leadership of the Extreme and Dangerous for Innovative Results; DHS S&T funded START CSTAB 1.12 project) content coding scheme and indices of technical capabilities and sophistication. Finally, we conducted analyses to identify organizational attributes and resources that differentiate certain VEOs and their competition in the Jihadi Industry.

Sample Definition

We partnered with three government civilian subject matter experts (SMEs) familiar with the Jihadi Industry to select key players within the industry that would offer the best comparison of attributes highlighting similarities and differences between the VEOs and their competition. Specifically, we focused on Da'esh and its affiliates as well as affiliates of al-Qa'ida Central (AQC). Given that Da'esh was formerly an affiliate of AQC, this was considered the most appropriate sample for comparison, because by nature

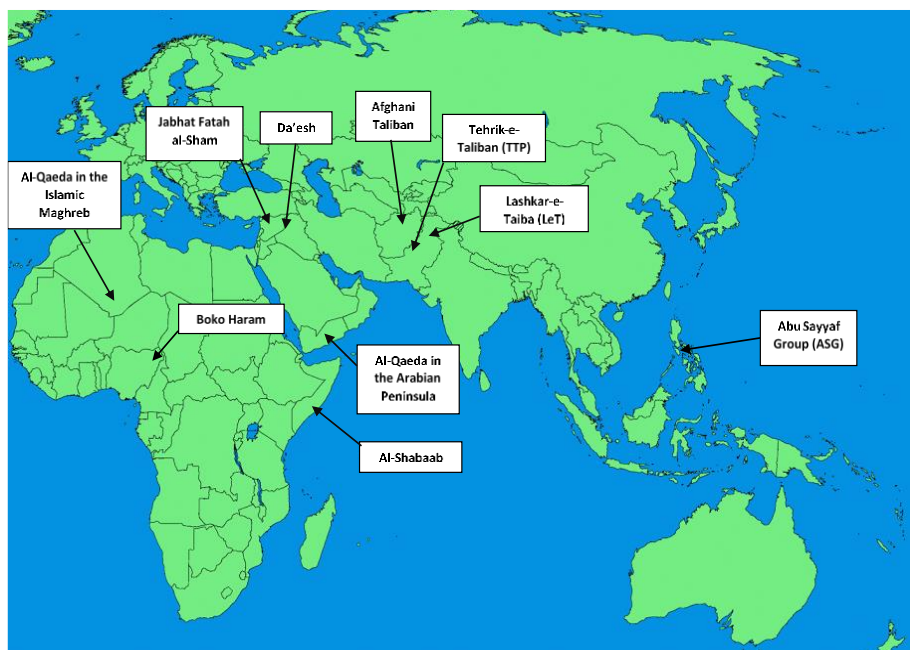


Figure 2. Map of VEOs selected and their primary region(s) of operation.

⁴ Ligon, G., Hunter, S., & Harris, D. (2012). Quantifying Leader Lives: What Historiometric Approaches can tell us. *The Leadership Quarterly*, 23, 1104-1133.

of forming those alliances (with the exception, perhaps, of AQAP⁵), the ideology, tactical operations, and targeting preferences of the affiliates were shaped by AQC. For the scope of this project, we compared organizations that are considered to primary competitors within the Jihadi Industry. As shown on Figure 2, the 10 VEOs examined include: Da'esh, Jabhat Fateh al-Sham (al-Nusra Front), al-Qa'ida in the Islamic Maghreb (AQIM), al-Qa'ida in the Arabian Peninsula (AQAP), al-Shabaab, Boko Haram, the Afghan Taliban, Tehrik-e-Taliban (TTP), Lashkar-e-Taiba (LeT), and Abu Sayyaf Group.

Data Gathering

This research employed an open-source, historiometric methodology⁶ to gather information about the organizations. Secondary data gathered from academic and government sources were the main sources we used for the present effort (e.g., profiles and data from START, Southern Poverty Law Center, FBI, Mapping Militant Organizations by Martha Crenshaw), but information was also gathered online from scholarly case studies and public-records databases (e.g., Lexis-Nexis). We also used primary documents from the organizations themselves, such as manuals, propaganda, videos, and websites run by the organizations. In addition, for the leadership assessments, we relied upon primary speeches obtained by the Open Source Center combined with behaviors abstracted from SME-generated profiles.⁷ Information and data resources were gathered by graduate students in I/O psychology, criminology, and information science and technology, trained in the study of ideological organizations and employing similar search tactics and filtering processes. This ensured that (1) any gathered data were from reputable sources and (2) sufficient data were found for a variety of organizational characteristics (e.g., leadership, formalization). Data that was found to be conflicting between sources were further investigated, with information from the academic and government resources (e.g., START) being the primary sources to determine the final ratings for each piece of data. If START data was not available for a particular index, the coders followed a hierarchy of reputable sources to determine what information would be used to make the assessment. All coders, in order to reduce bias and ensure the quality of the data being coded, followed this procedure.

Some of the data sources we reviewed for this research contained web content (e.g., videos, audio statements, websites, propaganda) from potential adversaries that may be unsafe to access from unsecure computers. Thus, we utilized the Information Assurance (IA) labs within our College of Information Science and Technology (IS&T) for this purpose. In this way, we were able to protect our resources from any computer malware that may have been included in the download. We used one of the STEAL rooms in the IA College in order to extract potentially harmful web data for our record, since much of this data is subject to removal from the Internet. STEAL is the acronym for Security Technology Education and Analysis Laboratory, used to name facilities that are specific to Information Assurance education and research. The STEAL facilities provided our research team education and research opportunities to explore security technologies, malicious software, and websites and tools that are potentially harmful to other computers. This software includes viruses, worms, and other potentially harmful code, which cannot be examined in a normal user-room or classroom setting. Once we accessed the web material that we needed in order to extract the data within the STEAL lab, we were able to execute various tools (e.g., "wget" downloads to store computer code and receive a return of the PHP and other domain identifiers used in the organization's webpages and social networking sites; these

⁵ AQAP is essentially a branch of AQC that took on a Yemeni constituency, as opposed to a Yemeni group that became globally (rather than locally) focused.

⁶ Ligon, G., Hunter, S., & Harris, D. (2012). Quantifying Leader Lives: What Historiometric Approaches can tell us. *The Leadership Quarterly*, 23, 1104-1133.

⁷ McCants, W. (2016). *The Believer: How an introvert with a passion for religion and soccer became Abu Bakr al-Baghdadi*. Brookings Essay.

procedures facilitated our ability to evaluate these organizations in a comparative way. This data was used to view potentially corrupted data (such as leader videos posted to non-secure webpages) and to evaluate the program language used by these organizations.

Coding and Analysis

One of our main research objectives for this report was to identify key areas where VEOs in our sample differ. In order to accomplish this, we coded the organizations in several ways. First, we used the organizational predictors and criterion that apply to ideological organizations from the LEADIR project.⁸ These scales can be obtained in the full codebook available from START, for CSTAB project 1.12. The scales we used to code each organization were developed using a psychometric approach to scale development. For each category of variables (i.e., organizational characteristics, performance-related constructs, and controls), operational definitions with readily identifiable benchmark examples were developed. Coding schemes were developed with the same practices used in psychometric test development.⁹ For example, behaviorally anchored rating scales (BARS) of objective markers were developed based on the sample at hand to provide coders with anchors for the assessment of complex features and performance. In addition, these BARS were defined, iteratively reviewed, and edited by a subset of SMEs in test item writing to ensure clarity, parsimony, and uni-dimensionality. Second, we used the available web materials of the organizations to assess their cyber sophistication and expertise. These materials were accessed using the STEAL lab and evaluated by technical SMEs to determine the sophistication of their resources, which in turn reflects their internal expertise. Finally, we used a VRIO analysis to evaluate key differences between the organizations in terms of resources and capabilities. This analysis was used to complete research objective 3.

Coder Training

Raters underwent 40 hours of training in the theory underlying violent organizations, ideological organizations, and organizational structure, as well as best practices in historiometric coding and developing shared mental models about each construct to be coded. To ensure that shared mental model, coders first individually rated 10 percent of the sample organizations and then met to discuss their ratings to reach a better understanding of each organizational characteristic and preliminary organizational-level performance construct. Before meeting, interrater reliabilities were calculated to be above .90 for organizational characteristics and .80 for organizational performance, which are adequate levels of interrater agreement.

Analyses

The primary analyses used for this project were descriptives, correlations, and between subject ANOVAs (analysis of variance). These analyses allowed us to compare the organizations within their industry in a way that told us if there were statistically significant differences. In addition to statistical analyses, we used SMEs to determine differences between organizations on overall constructs of interest, discussed further in subsequent sections. In addition, because we sampled over 1,400 attacks and coded them on 27 indicators (e.g., weapon uniqueness), we used principal components analysis (PCA) to reduce the elements of performance into the most descriptive components underlying key performance indicators. The results of these analyses and case evidence are provided throughout the remaining sections of this report.

⁸ Ligon, G., Harms, M., & Harris, D. (2014). *Leadership of the Extreme and Dangerous for Innovative Results*. Project completed for the START consortium. Please contact START or the PI Gina Ligon for more information on this project.

⁹ Osterlind, S. J. (1983). *Test Item Bias*. Series: Quantitative Applications in the Social Sciences (SAGE University Papers 30, Sage Publications, Inc.

Research Objective One: Assessment of the Organization and Leadership Profiles

Da'esh

Overview

In a longitudinal study of the Da'esh (aka, The Islamic State, ISIS, ISIL) organizational structure between 2008-2014, we presented a snapshot of their organizational differentiators among other VEOs in the Global Jihad Industry.¹⁰ We identified three types of individuals who comprise the senior leadership team (i.e., Sharia and Shura Councils at the organizational level, as well as key influencer nodes throughout the Syria and Iraq region): 1) ideologues (e.g., al-Baghdadi), 2) Violence Seekers (e.g., al-Shishani), and 3) Pragmatics (e.g., al-Turkmani). First, the diverse nature of this group, particularly when compared to other groups in our longitudinal study of VEO leadership structures,¹¹ creates a framework for making and communicating decisions that echoes the diverse nature of the leadership team. Moreover, our longitudinal analysis of Da'esh indicates that the leadership team in particular is not a monolithic entity; instead, it is comprised of individuals with heterogeneous backgrounds, mental models, and characteristics. In the following section, we briefly review (1) the Da'esh mission as it relates to (2) the organizational structure designed to support it, (3) the living and recently killed or captured leadership members, (4) the recruitment strategies for people and for finances, and (5) the attack profiles.



Figure 3. Da'esh flag.

Organizational Structure

From a review of leader speeches,¹² the dataset of Aymenn Tamimi,¹³ a review of the primary training doctrine,¹⁴ and other archival material provided by Aaron Zelin,¹⁴ we have identified a four-part mission of Da'esh: 1) establish and maintain the Caliphate (essentially providing Da'esh ideological jurisdiction to redefine Islamic law to fit its strategic objectives, 2) build an Islamic State (and all the administration that comes with it), 3) engage in sustained and barbarically escalating violence, and 4) perpetuate the narrative of an imminent apocalypse. To support this multi-pronged mission, the Da'esh organization—similar to the training doctrine¹⁵ and digital narrative¹⁶ that regales it—is bifurcated around its puritanical, extremist religious intolerance and the prioritization of the ambitions that differentiate it. While many of its administrative offices were in place since 2006, the organization has been structured in

¹⁰ Ligon, G.S., Harms, M., Crowe, J., Derrick, D.C., & Lundmark, L. (2014). *The intangible nature of the Islamic State*. Report prepared for the Strategic Multi-layer Assessment Office, Pentagon Joint Staff J39.

¹¹ Ligon, G.S., Harms, M., & Francis, K. (2014). *Who is new leader of the Islamic State?* Research Brief prepared for the National Consortium for the Study of Terrorism and Responses to Terrorism (START).

¹² Pelletier, I., Lundmark, L., Gardner, R., Ligon, G., & Kilinc, R. (2015). Why ISIS messaging resonates. *Studies of Conflict and Terrorism Journal*.

¹³ Al-Tamimi, A. J. (2013). The Islamic State of Iraq and al-Sham. *Middle East Review of International Affairs Journal*, Retrieved from: www.aymennjawad.org/14151/the-islamic-state-of-iraq-and-al-sham

¹⁴ <http://jihadology.net/>

¹⁵ Jacob Olidort & Marcus Sheff (2016) did a terrific analysis of the Islamic State's Textbooks, Guidance Literature, and Indoctrination Methods. <http://www.washingtoninstitute.org/policy-analysis/view/teaching-terror-the-islamic-states-textbooks-guidance-literature-and-indoct>

¹⁶ Derrick, D.C., Sporer, K., Church, S., & Ligon, G.S. (2017). Ideological rationality: A cyber profile of ISIS. *Dynamics of Asymmetric Conflict Journal*.

a way for maximum resilience since 2010. The Da'esh top management team operates in a matrix structure, or an organization with complex command system characterized by multiple lines of authority.¹⁷

Some senior leaders occupy more than one role, and most lines of authority are more advisory and theoretical than punitive or directive in nature. The structure is echoed throughout the regional provinces, which allows for a resilient, autonomously staffed organization. The compartmentalization of Da'esh means that it can sustain significant human capital loss in one theater without much impact on adjacent regions nor the top management team. Because the broad strategic objectives are already outlined and internalized by members (see mission areas 1-4 above), and the structure is in place to support this mission, its implementation can be unambiguously executed by local leaders who will continue to work toward the strategic objectives even if their superior dies or is captured.¹⁸

The decentralization of the execution of the strategic mission allows for greater customization of the mission to fit the needs and demands of a local populace and key elites. Similar to counter-intelligence work done by the KGB operatives who trained the former Baathists,¹⁹ Da'esh began each of its campaigns by intelligence gathering on key elites (e.g., powerful local tribal leaders, armed groups, influential families) and marking them for either cooperation or elimination. This can take the form of identifying vices, such as infringements of Sharia (e.g., homosexuality, alcohol or drug use), or inducements (e.g., money or power) of these elites. This has another benefit in that the leadership of Da'esh is behind the scenes, particularly in Syria where locals are already weary of oppressive outsiders, and the implementation of the strategic objectives of Da'esh is implemented by local elites who are either committed or simply compliant to Da'esh. This structure, similar to a franchise organization, allows for firewalls between regional leaders where integration is loose and interdependence is minimal.

Two Organizational Nodes of Vulnerability

Security and Intelligence Council: The Communication Backbone

While regional provinces are relatively isolated from each other, directives from the Central leadership team and Caliph still need to be communicated. There is much evidence of coordination and collaboration within Da'esh and across these regional boundaries.²⁰ In a review of several members of Da'esh leadership,²¹ it was noted that one group of leaders in particular served as a communication node across the Provinces. The SIC, modeled after Saddam Hussein's intelligence services, is a small, nimble organization that does initial intelligence work leading up to Da'esh taking a region (as described above, SIC identifies elites' vices or virtues to be used for later influence of them) as well as provides security to the top management team of Da'esh. Similar to functions in state military structures, the SIC is central to the counter-intelligence (CI) mission and function of Da'esh, ensuring that plots to overthrow the central leadership are undermined. In addition, the SIC oversees communications to ensure that the top management team a) has direct knowledge of potential plots and b) can deliver critical messages across geographic boundaries. Some evidence exists that wives are used in this communication mechanism, but

¹⁷ Davis and Lawrence (1977) seminal work on the matrix organization.

¹⁸ Orton, 2016

¹⁹ Weiss and Hassan (2015) identified the Baathist influence internal to Da'esh.

²⁰ For a review of Da'esh Collaboration, please see the SMA talk by Ligon in June of 2016.

²¹ Kyle Orton's work on Da'esh leader profiles provides much evidence about SIC functions

always in direct relation to members of the SIC.²² Implications from a military capability of this structure are as follows. First, geographic leaders are almost entirely dependent on these individuals for information from central leadership. While the autonomous fief-like structure of the provinces allows for resilience from leader decapitation at the regional level, it also creates a dependency on the SIC members for information and strategic direction. Second, given the role these individuals play in creating alliances with tribal elites and local leaders via blackmail and traditional CI work, their elimination or capture would likely reduce their influence in the region to some degree, as many of the tribal leaders appear to be aligned based on compliance to deter personal loss versus commitment to the cause.²³

Governorship: Unwieldy Organizational Dependencies

One benefit that local populations have described about Da'esh is their capacity to provide basic services and maintain order where government services—particularly in Syria—have failed.²⁴ A central key to this governance is the imposition of civil administration security forces who investigate transgressions and mete out public punishment as a deterrent. One benefit of their presence is the distribution of resources in a more equitable, predictable manner. In addition, they are charged with enforcing rulings from the Central Office for Investigating Grievances,²⁵ which allows for mediation among local population members about issues such as land disputes, theft, and other criminal acts. Thus, the Hisbah, while deemed the “religious police” by popular media, also serve an important role in delivering on the promise of governance on which Da'esh depends.

Here is where the problem lies: the Hisbah fall under the civil authority of the Governor of a given regional area, but so do the military commanders. Thus, if a field military leader has expended an undesirable amount of his front-line fighters (as was the case in Raqqa during summer of 2016), the Governor can and will activate the Hisbah to join the military fighting units. The Hisbah can act as civil criminal justice professionals under one “title authority” directed by the governor, and then be activated to serve as front line military fighters when needed. When we first began examining Da'esh, we thought this rotation among military and administrative units allowed for greater collaboration, reduced siloes and other organizational benefits—and it did during times of steady state. However, under concerted attack by the Coalition, this “rotational” organizational structure has a significant limitation. As the Hisbah “changes assignment” to military roles, the governance function they afforded to their regional home station is also diminished. In Raqqa, specifically during June and July 2014, reports of civil unrest and inability to govern effectively may have been a direct result of this organizational structure deficit.

Leadership

As noted above, Da'esh top management team operates in a matrix structure, or an organization with complex command system characterized by multiple lines of authority.²⁶ Table 1 highlights some functions of each of the sub-structures within Da'esh.

²² Yousseff & Harris (2015) described the roles of wives in ISIS in their story in the *Daily Beast*.

²³ Foerstl, K., Azadegan, A., Leppelt, T., & Hartmann, E. (2015). Drivers of supplier sustainability: Moving beyond compliance to commitment. *Journal of Supply Chain Management*, 51(1), 67-92.

²⁴ A 2014 report by the Institute for the Study of War describes ISIS' capacity to govern in Raqqa, al-Bab, and Manbij

²⁵ As described in Issue 1 of *Rumiyah*, the online English Da'esh publication

²⁶ Davis, S. M., & Lawrence, P. R. (1977). *Matrix*. Reading, Mass: Addison-Wesley Publishing Company.

Table 1. Leadership structures* and functions of Da'esh.

Leadership Structure	Function	Exemplar Members
Shura Council	9 to 11 member advisory board; functional leads who approve Caliph's appointments and communicate leadership directives down the chain	<ul style="list-style-type: none"> Abu Arkan al-Ameri
Military Council	Design and implement military strategy; with one exception, every head (Deputy to Caliph) has been a former Saddam regime element member	<ul style="list-style-type: none"> Abd al-Rahman al-Qaduli (aka, Abu Ali al-Anbari)
Security & Intelligence Council	Subcommittee to military council, but with operational autonomy. SIC provides personal security to top management team and oversees mail communication among Da'esh provinces	<ul style="list-style-type: none"> Iyad al-Jumaili
Sharia Council	Has two subcommittees: prevention of vice (e.g., Hisba/religious police) and promotion of virtue (dawa, also over education council)	<ul style="list-style-type: none"> Turki al-Binali
Media Council	Has primary editorial responsibility for guidance and official "old" media (e.g., al-Furqan radio); made up of mainly non-Iraqi members	<ul style="list-style-type: none"> Amr al-Absi (aka, Abu Atheer al-Absi)
Education Council	Develop textbooks (both religious and practical training), guidance literature, and indoctrination methods	<ul style="list-style-type: none"> Thu Alqarnayin²⁷
Governors	Administrative and military control in their provinces	<ul style="list-style-type: none"> Abu Sufian Salman Abdul Shabib (Governor of South Mosul)
Iraq Regional Command	Military commanders in regions (no administrative responsibilities)	<ul style="list-style-type: none"> Muhammad al Azzawi (Military Commander of Fallujah)
Syria Regional Command	Military commanders in regions (no administrative responsibilities)	<ul style="list-style-type: none"> Mohammad al Yousef (aka, Abu Hammam; Military Commander of Aleppo)
Cabinet	Various functional leads such as finance minister, prisoner affairs, governors of provinces	<ul style="list-style-type: none"> Muwafaq al-Kharmoush (aka, Abu Saleh)
Top Management Team	Caliph and his key advisors	<ul style="list-style-type: none"> Abu Bakr al-Baghdadi

*Names verified through at least two peer-reviewed sources²⁸

In Figure 4, we depict the types of leadership in each of the main functional areas. Councils with green shading (e.g., al-Kharmoush) indicate functions with pragmatic, or problem-focused, leaders. Councils with blue shading indicate the presence of more ideological, or belief-based, leaders (e.g., al-Binali). Finally, the red shading connotes the presence of violence seeker leaders (e.g., Batirashvili). One differentiator of Da'esh indicated from this analysis is the diversity of members who occupy functional positions across the leadership structure of Da'esh.

²⁷ The Education Emir name was only located via the Mosul Eye Blog, an anonymous Iraqi blog <https://mosuleye.files.wordpress.com/2015/12/mosul-eye-education-under-Da'esh.pdf>

²⁸ Kyle Orton (Henry Jackson Society) and Novetta reports were primarily used for this table.

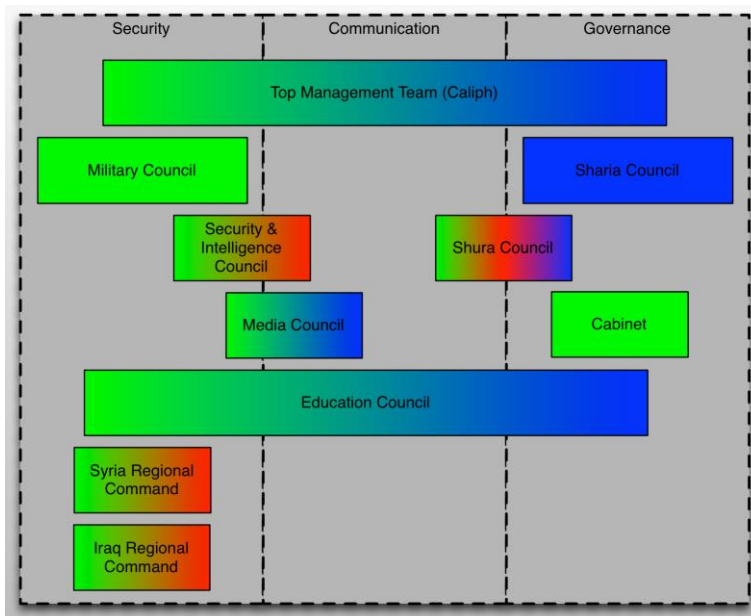


Figure 4. Da'esh leadership structures.

Recruitment and Fundraising

Da'esh has the most porous organizational boundaries of any group in our sample. Moreover, the use of multiple languages on their primary forums, the messages to foreign fighters to join by whatever means possible, and the direct targeting of multiple generations²⁹ indicate that Da'esh casts a wide net with a sophisticated use of cyber-facilitated communication channels to recruit both members and potential funders. Their use of both weak and strong ties in cyber-facilitated recruiting indicates that they understand how to gain brand recognition in a way that will capitalize on one-on-one channels for more personalized recruiting.³⁰ For fundraising, the story is a bit more complicated. While they do have a diverse portfolio of both legal and illegal funding sources, they do not participate in the global market in a way that could help them be more resilient over time. For example, while they gained control of critical resources such as oil refineries in the North of Iraq in 2014 and 2015, they primarily sold the materials to residents of the "Caliphate" rather than in the global market (for a detailed explanation of the Da'esh economy shortfalls, please see Paraszczuk's review in *The Atlantic*³¹).

Attack Profile

Da'esh is a prolific attacker in the present sample of VEOs for LEADIR. For this year's study, we sampled 10 percent of their attacks to develop a profile of their destruction to people, property, processes, and symbols in both Syria and Iraq. First, Da'esh attacks require coordination across members. For example, every year at the anniversary of the invasion of Iraq, Da'esh unleashes a coordinated set of attacks across multiple targets in Iraq. Because this has come to be expected over the past 10 years, having multiple perpetrators across locations on a single, high-security date demonstrates that the pragmatic approach to planning attacks results in highly successful and lethal events for this organization. Next, Da'esh has a greater proportion of successful attacks versus unsuccessful attacks in our sample. This is particularly

²⁹ Hunter, S.T., Crayne, M., Shortland, N., & Ligon, G.S. used ISIS as a case study in our review of recruiting methods of VEOs in a forthcoming American Psychologist.

³⁰ See Ligon et. al (2015). We published a study in *Journal of Strategic Security* in 2015 that described how brand concepts such as firm legitimacy and brand recognition can be used to understand the magnetic appeal of VEOs.

³¹ Paraszczuk, J. (2015, September 2). The ISIS Economy: Crushing Taxes and High Unemployment. *The Atlantic*, Retrieved from <https://www.theatlantic.com/international/archive/2015/09/isis-territory-taxes-recruitment-syria/403426/>

remarkable because they also have many more attacks than the other groups we examined in 2015, resulting in a higher hit rate of lethal, destructive attacks compared to other Jihad organizations. Finally, they have less surprising or novel attacks as well as less unique weapons when compared to the other groups in our sample. When examining how they scored on an attack factor labeled, “unique proficiency,” Da’esh scored lower than al-Shabaab and Jabhat Fateh al-Sham on weapon uniqueness, level of expertise required, and attack uniqueness. What this profile—high coordination and high effectiveness coupled with lower innovation of attacks—indicates is that Da’esh has perfected their attacks, but perhaps at the expense of developing more creative, surprising events. Given their focus on efficiency and repeatable processes, it makes sense that over time, Da’esh may become increasingly predictable in their tactics.

Al-Qa’ida in the Islamic Maghreb

Overview

Al-Qa’ida in the Islamic Maghreb (AQIM) is a Salafi-jihadist terrorist organization operating in the Sahara and Sahel region of Northern Africa. AQIM’s goal is to eliminate Western influence in Northern Africa and overthrow regional governments including Algeria, Libya, Mali, Mauritania, and Tunisia and establish *shariah*.³² Prior to 2007, AQIM was known as Groupe Salafiste pour la Predication et le Combat or the Salafist Group for Preaching and Combat (GSPC). GSPC emerged in 1998 when several generals from the Armed Islamic Group (GIA) split from the group over differences concerning the GIA’s excessive acts of violence in the Algerian Civil War.³³ In September 2006, leadership from GSPC and al-Qa’ida reached a formal alliance and nearly a year later, in January 2007, GSPC rebranded to al-Qa’ida in the Islamic Maghreb.³⁴



Figure 5. AQIM flag.

Organizational Structure

AQIM operates under a hierarchical structure similar to most al-Qa’ida affiliates. However, AQIM’s organizational structure is also more deterritorialized and departmentalized compared to other organizations in the Jihadi Industry. For instance, reports suggest that the group is organized around geographic zones with each zone having one or more operational katibats (battalions).³⁵ Katibats can range in size from just over a dozen to several hundred fighters. Based in the rugged region of Kabylie, a fourteen-member Shura council serves as the central leadership team for AQIM. The Shura council is headed by Emir Abdelmalek Droukdel and includes regional commanders and the heads of the media, judicial, political, and military committees.³⁶ AQIM’s organization structure also consists of Majlis al-Ayan, the Council of Notables, and a Sharia Council that rules on religious matters.³⁷

³² Laub, Z. & Masters, J. (2015, March 27). CFR Backgrounders: Al-Qaeda in the Islamic Maghreb, *Council for Foreign Relations*. Retrieved from www.cfr.org/terrorist-organizations-and-networks/al-qaeds-islamic-maghreb-aqim/p127.17

³³ *ibid*

³⁴ Al-Qaeda in the Islamic Maghreb. (n.d.) *Countering Extremism Project*. Retrieved from <https://www.counterextremism.com/threat/al-qaeda-islamic-maghreb-aqim>

³⁵ Boeke, S. (2016). Al Qaeda in the Islamic Maghreb: Terrorism, insurgency, or organized crime? *Small Wars & Insurgencies*, 27(5), 914-936; Pham, P. (2011). Foreign influences and shifting horizons: The ongoing evolution of Al Qaeda in the Islamic Maghreb. *Orbis*, 55(2).

³⁶ *Ibid.*; Boeke, S. (2016)

³⁷ Al-Qaeda in the Islamic Maghreb. (n.d.) *Countering Extremism Project*. Retrieved from <https://www.counterextremism.com/threat/al-qaeda-islamic-maghreb-aqim>

Leadership

AQIM's emir (leader) is Algerian-born Abdelmalek Droukdel who has been leading the group since 2004 and is credited with forming the alliance with al-Qa'ida. Droukdel is trained as an engineer and is said to be an expert in explosive devices.³⁸ Unlike ideologically-driven leaders, Droukdel has never attended any of al-Qa'ida's formal training camps nor has he received an education in a foreign madrassa.³⁹ Instead, Droukdel relies on his tough-minded, charismatic-socialized leadership style and excellent public speaking skills.⁴⁰ According to our analysis, one of Droukdel's major limitations is his lack of absolute power compared to other VEO leaders. Droukdel's relegated power is largely a function of internal disputes as well as AQIM's position as a regional franchise under the larger al-Qa'ida brand.

Prior to forming his own VEO in 2012, Mokhtar Belmokhtar was a prominent commander within AQIM's southern battalions.⁴¹ Dubbed "Mr. Marlborough," Belmokhtar enhanced AQIM's fundraising portfolio due to his success in the illegal cigarette trade. However, as his fame grew, Belmokhtar also became increasingly distant from AQIM's core leaders.⁴² To counterbalance Belmokhtar's growing prominence, Droukdel turned several battalions in the southern region over to Abu Zeid and gave Yahia Djouadi overall responsibility over the region. This strategy did not, however, deter Belmokhtar, nor did it slow his progress into Mali. Eventually in December 2012, Droukdel officially excommunicated Belmokhtar with the support of AQIM's senior Shura (leadership) Council. In addition, the Shura Council also publicly chastised Belmokhtar for failing to follow orders and for not sharing illicit funds.⁴³

Recruitment and Fundraising

Compared to other VEOs, AQIM is one of the least effective organizations at recruitment. In fact, AQIM is said to "have had no shortage of low-skilled recruits adequate for its typical operations in North Africa, the group would need a different kind of recruit, with more cultural knowledge and sophistication, to operate within Europe without detection."⁴⁴ Rather than fully subscribe to al-Qa'ida central's global mission, AQIM heavily relies on propaganda that plays to the anti-colonial sentiment in and around Algeria, effectively localizing much of their recruitment base. AQIM does, however, operate its own media wing, Al-Andalus Media Productions, which provides an additional resource for recruitment.

AQIM has previously been described as al-Qa'ida's wealthiest affiliate.⁴⁵ Since the departure of Belmokhtar, however, there is serious doubt as to AQIM's ability to sustain long-term funds. AQIM heavily relied on Belmokhtar and his familial connections in the Southern Maghreb for trafficking and smuggling operations.⁴⁶ Nevertheless, AQIM continues to thrive at illegal methods, especially kidnapping for ransom and trafficking, to secure short-term funding. In fact, AQIM has become a key player in the drug trafficking business between Europe and South America.⁴⁷ As a franchisee, AQIM is also known to receive material and financial support from al-Qa'ida Central as well as al-Qa'ida supporters across the

³⁸ Laub, Z. & Masters, J. (2015)

³⁹ Atwan, A. B. (2008). *The Secret History of al Qaeda*. Oakland, California: University of California Press.

⁴⁰ Ibid

⁴¹ Laub, Z. & Masters, J. (2015)

⁴² Chivvis, C. S. & Liepman, A. (2013). "North Africa's Menace: AQIM's Evolution and the U.S. Policy Response." *RAND Corporation*. Retrieved from: www.rand.org/pubs/research_reports/RR415.html

⁴³ Ibid

⁴⁴ Ibid, 5

⁴⁵ Arieff, A. (2013). "Crisis in Mali." *Congressional Research Service*. Retrieve from: <https://fas.org/sgp/crs/roq/R42664.pdf>

⁴⁶ Laub, Z. & Masters, J. (2015).

⁴⁷ Al-Qa'ida in the Lands of the Islamic Maghreb (AQIM). (2013). *Australian National Security*. Retrieved from: <https://www.nationalsecurity.gov.au/Listedterroristorganisations/Pages/Al-Qaida-in-the-Lands-of-the-Islamic-Maghreb.aspx>

globe.⁴⁸ Finally, AQIM is believed to receive funding from external connections to state and non-state actors. For example, Iran and Sudan have been accused of funding AQIM by the Algerian Government.⁴⁹ VEOs in the region such as Boko Haram and al-Shabbab have also been connected to AQIM.⁵⁰

Attack Profile

Prior to their rebranding with al-Qa'ida, the majority of AQIM's attacks involved small arms, guerilla-style assaults against military and government officials in Northern Algeria. Beginning in 2007, however, AQIM broadened the scope of their attacks and successfully perpetrated violence across Northern Africa including Algeria, Mali, Mauritania, and Niger.⁵¹ AQIM's expanded reach largely reflected Droukdel's ambition coupled with his technical expertise in explosive devices. Most notably, AQIM became more heavily involved in sophisticated bombings since 2007. Although AQIM proclaims France and Spain as their "far enemies," the organization has never successfully carried out an act of violence outside of the Middle East.⁵² AQIM also excels at kidnappings for ransom to raises funds and facilitate prisoner exchanges. In particular, AQIM is known for taking symbolic hostages such as humanitarian workers, tourists, and diplomats.

Afghan Taliban

Overview

The Taliban is a Sunni Islamist nationalist and pro-Pashtun organization founded in the early 1990s, and its main stated goal is to expel westerners from Afghanistan. "Taliban," Pashto for "students," first gained support in southern Afghanistan among young men studying Islam in Afghanistan and Pakistan madrasas.⁵³

What the Taliban has gained most notoriety for among DoD audiences is that it provided safe haven for al-Qa'ida leading up to the 2001 attacks. In addition, it is known for its strict interpretation of Qur'anic instruction and jurisprudence, which results in brutal treatment of and policies toward women, political opponents, and religious minorities.⁵⁴



Figure 6. *Afghan Taliban flag.*

Organizational Structure and Leadership

The Afghan Taliban remains relatively localized within the Afghan-Pakistan regions. After it was revealed that Mullah Omar, the central Taliban leader, had been deceased over two years prior to the public announcement, the extent to which Taliban leadership is able to control its rank-and-file is a matter of debate. Appointments to positions of leadership are decided at the local level by consensus through commissions appointed by the central leadership team, and only when that consensus is reached is a decision made.⁵⁵ We coded the Taliban as hierarchical and departmental, but due to the personal conflicts among leaders, the organizational structure is characterized as a network of networks without an

⁴⁸ Al-Qaeda in the Islamic Maghreb. (n.d.)

⁴⁹ Ibid

⁵⁰ Laub, Z. & Masters, J. (2015).

⁵¹ Arieff, A. (2013)

⁵² Chivvis, C. S. & Liepman, A. (2013).

⁵³ NCTC report in June 2016 described historical origins of the Taliban nicely.

⁵⁴ Giustozzi, A. (2012) *Decoding the New Taliban: Insights from the Afghan Field*. Oakland, CA: University of Columbia Press.

⁵⁵ Giustozzi, A. (2010). Negotiating with the Taliban: Issues and Prospects. *The Century Foundation*. Retrieved from <https://tcf.org/assets/downloads/tcf-Giustozzi.pdf>

overlaying leadership structure as found in Da'esh and other Jihad organizations. In addition, the nature of the organization changes by region. In the south, it is primarily religious and appointed leaders are typically mullahs. In the east, former *mujahideen* and other non-religious leaders have a larger presence. We have coded the leadership styles of three individuals who have been in power from 1996-present. First, Mullah Omar was in power from 1996-2016⁵⁶ and pushed for greater power from central leadership. However, his main leadership contribution was to replace commanders and resolve disputes, as well as administer punishments and rewards of commanders. Omar was adored by followers, as he was proclaimed Amir ul-Momineen (leader of the faithful), one of the highest titles in Islam.⁵⁷ Due to the inability to obtain primary documents of his speeches or validate that his public statements were indeed him, we were unable to code whether Omar was personalized or socialized in his leadership style.

Mullah Mansour led the Taliban from July of 2015 to May of 2016, when he was reportedly killed in a U.S. drone strike. His top management team included Siraj Haqqani and Moulavi Haibataullah Akhunzada, and the latter has taken over leadership responsibilities since May 2016.⁵⁸ This leadership team is heavily allied with al-Qa'ida, and this TMT has led the AQC leadership to favor the Taliban leader as the "Emir of the Faithful," owed loyalty to all Muslims (and, counter to the claim that al-Baghdadi of Da'esh is the true Caliph). Given that the new leadership team has ties to AQC, the Taliban, and the Haqqani Network, it could make the ideological claim of true ideological superiority to the broader Ummah. In addition, given Siraj's extended reach to foreign fighters, it is our recommendation that the Taliban is an (again) emerging threat that has similarities shared with Da'esh in the 2013-2014 timeframe during its rise to power.

Recruitment and Fundraising

Since 2010, the Taliban has significantly improved its recruitment practices.⁵⁹ Moreover, after releasing public statements of how to accept recently surrendered government and security forces personnel into their ranks, Taliban leaders have specifically targeted leaders with high levels of expertise, specialized training, and experience with government and policing functions. In addition, the second in command, Siraj Haqqani, is known for his skill at recruiting talent from a variety of regions, given his pragmatic focus on strengthening collaborations across the region and outside of Afghanistan, particularly. Thus, the Taliban is one the highest rated groups in terms of recruitment strategies, as most members engage in the organizational functions with the vigor of a full-time executive after undergoing rigorous training and formalized instruction. However, at present, the Taliban is a relatively homogenous organization (93% Pastun), although the non-Pastun membership has risen in recent years.⁶⁰

The sources of fundraising are varied and resilient, resulting in a relatively munificent VEO (some estimates range in the billions).⁶¹ Afghanistan in general has emerged as the world's largest vertically integrated producer of heroin, and the Taliban plays a central role in the supply chain. The Taliban has

⁵⁶ A biography for his successor states that Mullah Omar died on April 23, 2013

⁵⁷ Gall, C. (2015, July 30) Mullah Muhammad Omar, Enigmatic Leader of Afghan Taliban, Is Dead. *The New York Times*. Retrieved from <https://www.nytimes.com/2015/07/31/world/asia/mullah-muhammad-omar-taliban-leader-afghanistan-dies.html>

⁵⁸ Roggio, W., & Joscelyn, T. (2015). The Taliban's new leadership is allied with al Qaida. *The Long War Journal*. Retrieved from <http://nyti.ms/1LTbjCo> www.longwarjournal.org/archives/2015/07/the-talibans-new-leadership-is-allied-with-al-qaeda.php

⁵⁹ Forbes, J., & Dudley, B. (2013). Increase in efforts to recruit from Afghan government and security forces. *The CTC Sentinel*, 6 (11-12).

⁶⁰ Giustozzi (2012) has a wonderful description and map of fighters in his 2010 chapter.

⁶¹ Micallef, J. V. (2015, November 14). How the Taliban Gets Its Cash. *The Huffington Post Online*. Retrieved from www.huffingtonpost.com/joseph-v-micallef/how-the-taliban-gets-its-b-8551536.html

diversified the products it smuggles in these supply chains, using its networks to transport munitions, hashish, and other rare goods. In addition to these illegal fundraising sources, the Taliban operates a range of legal commercial businesses, such as emerald mines in the Pakistan Swat Valley. In addition, since a critical resource of the Taliban is the large swath of land it controls, it levies taxes against its occupants as a renewable source of funds. Thus, the Taliban has a diverse, sustainable funding portfolio across both illegal and legal channels.

Attack Profile

The coordination across Taliban attacks is unimpressive. Operationally, the Taliban has historically been more reactive to NATO armies and the ISAF in general.⁶² While the custom development of IEDs is a unique asset for the Taliban, the lack of central command and control from leadership has likely limited the wide scale implementation or innovation from this group, resulting in limited damage to infrastructure of opponents, low levels of coordination and expertise in attacks, and one-off tactics.

Lashkar-e-Taiba

Overview

Founded in the early 1990s, Lashkar-e-Taiba (LeT) – or the “army of the pure” – is an Islamic militant organization based in Lahore, Pakistan which seeks to eliminate Indian forces from Kashmir and establish an Islamic caliphate in the Indian subcontinent. LeT subscribes to strict fundamentalist interpretations of Islam and views India’s control over Jammu and Kashmir as part of the global oppression of Muslims.⁶³ Despite repeated denials by Pakistani officials, intelligence analysts and international organizations frequently make links suggesting that LeT receives financial and logistic support from the Inter-Service Intelligence (ISI), the Pakistan government’s intelligence agency.⁶⁴ In fact, the association between the Pakistani government and LeT is evident enough that after two notable attacks (i.e., 2001 Indian Parliament attack and 2008 Mumbai attack), India forces came close to mobilizing as if they were attacked by the formal state of Pakistan.⁶⁵



Figure 7. LeT emblem and flag.

Organizational Structure and Leadership

Compared to other organizations in the Global Jihadi Industry, LeT remains relatively localized within the Jammu and Kashmir region. So far LeT’s main objective has been to liberate the Kashmir region and destroy India. There is recent evidence, however, that LeT intends to expand and adopt a more global agenda, “vow[ing] to plant the ‘flag of Islam’ in Washington D.C., Tel Aviv, and New Delhi.”⁶⁶ LeT is comprised of a tight-knit, hierarchically structured leadership team who is responsible for fundraising, recruitment, and other organizational functions. At the head of the organization is founder and former

⁶² Taber, R. (2002). *War of the Flea: The Classic Study of Guerrilla Warfare* Dulles, VA: Potomac Books.

⁶³ Sikand, Y. (2007). Islamist Militancy in Kashmir: The case of Lashkar-e-Taiba. In A. Rao, M. Bollig, & M. Bock (Eds.), *The practice of war: Production, reproduction and communication of armed violence* (pp. 215–237). London: Berghahn Books.

⁶⁴ Stephen T. (2011). “Lashkar-e-Taiba: Past Operations and Future Prospects,” *New America Foundation*. Retrieved from www.carnegieendowment.org/2011/04/27/Lashkar-e-taiba-past-operations-and-future-prospects-pub-43802

⁶⁵ Blank, J. (2013). Lashkar-e-Taiba and the threat to the United States of a Mumbai-Style Attack. *Rand Corporation*.

⁶⁶ “Lashkar-e-Taiba”. (2013) *American Defamation League*. Retrieved from: www.archive.adl.org/terrorism/symbols/lashkaretaiba.html

Islamic studies professor, Hafiz Muhammad Saeed.⁶⁷ We coded his style as that of an ideological-socialized leader, and Saeed has been with the group since the early 1990s and is known for attracting thousands to hear his fiery sermons, many of which criticize American imperialism.⁶⁸ Saeed's title "Hafiz" is only bestowed to those who have memorized the entire Koran. Unlike other VEO leaders, Saeed's longstanding regional popularity provides him with a large degree of influence and power among his followers. In addition, LeT has been able to establish and maintain several key relationships with other global and regional terrorist organizations under Saeed's leadership. For example, LeT is said to be a "de facto" affiliate of al-Qa'ida since the late 1990s, and LeT militants have also been known to fight alongside members from the Afghan Taliban, Haqqani Network, and the India Mujahedeen.⁶⁹ To help manage and coordinate organizational activities in Pakistan and abroad, Saeed relies on an extensive top-management team (TMT) that runs various departments such as the Department of Preaching and Reform, the Department of Public Relations, and the Department of Education.⁷⁰ Aside from Hafiz Saeed, important members of LeT's TMT include Zakiur Rehman Lakhvi, the chief of operations of JuD's compound (described below), Haji Muhammad Ashraf, the chief of finance, and Abdeul Rehman Makki, the head of the department of affairs and second to Saeed in LeT's hierarchy.⁷¹

Recruitment and Fundraising

LeT ability to operate with impunity in Pakistan provides several major organizational advantages compared to competitors in the Jihadi Industry. Following the United States' designation of LeT as a terrorist group in 2001, LeT rebranded under the name Jammāt ud-Dawā (JuD), which serves as a front to secure funds and recruit for the organization. JuD even holds a 200-acre property near Lahore, Pakistan (LeT's base of operations) that includes a madrassa, hospital, and market.⁷² To attract recruits, JuD promotes its ideology through weekly periodicals that focus on actions against Muslims and LeT's activities in the area.⁷³ LeT also operates several training centers in Pakistan where recruits are further indoctrinated and learn fighting skills. Recruits are also paid between \$100-\$300 dollars per month.

LeT is one of the most effect VEOs at fundraising in the Global Jihadi Market. Unlike competitors who rely on coercive support or illegal tactics that are only effective in the short-term, LeT (or JuD) relies on an extensive network of private and public donors and charitable organizations across Pakistan, Bangladesh, Nepal, and the Gulf region to establish a stable infrastructure.⁷⁴ Under the JuD name, LeT also maintains a website to solicit funds. As such, LeT's ability to operate within the JuD brand is clearly a strategic differentiator in the global marketplace, especially towards the organization's long-term sustainability.

Attack Profile

During their early years, much of LeT's violence included bombings or shootings carried out against Indian security forces. Then, in the mid-1990s, LeT also started targeting Hindu civilians in the Kashmir region.⁷⁵ In 2006, the organization engaged in more deadly, mass causality types of violence including

⁶⁷ Bajoria, J. (2010). CFR Backgrounders: Lashkar-e-Taiba. *Council for Foreign Relations*. Retrieved from: www.cfr.org/pakistan/lashkar-e-taiba-army-pure-aka-lashkar-e-tayyiba-lashkar-e-toiba-lashkar--taiba/p.17882.

⁶⁸ Bhattacharji, S. (May 7, 2013). "Lashkar-e-Toiba: A global threat." *Outlook India*; Also see The Investigative Project on Terrorism's summary on LeT

⁶⁹ Blank, J. (2013, June 12). Lashkar-e Taiba and the threat to the United States of a Mumbai-Style Attack. *Rand Corporation*. Retrieve from www.rand.org/content/dam/rand/pubs/testimonies/CT300/CT390/RAND_CT390.pdf

⁷⁰ Sharma, S.K. & Behera, A.B. (2014). *Militant groups in South Asia. Institute for Defense Studies & Analyses: New Delhi*

⁷¹ *ibid*; ADL. (2013).

⁷² Bajoria, (2010).

⁷³ Sharma & Behera (2014)

⁷⁴ Josh M. (Dec 18, 2007), "Extremist group works in the open in Pakistan," *Los Angeles Times*.

⁷⁵ Sharma & Behera (2013)

serial bombings and marketplace attacks. One of the most unique features of LeT's attack profile relative to other groups is their decision to refrain from suicide bombings. Instead, the organization endorses the tactic known as *fidayeen*, which involves heavily-armed militant units who attack specific targets intent on causing maximum damage.⁷⁶ Since individuals can survive these attack, the decision to refrain from suicide bombings has become an important tool for recruiting.

Tehrik-i-Taliban Pakistan

Overview

Tehrik-i-Taliban Pakistan (TTP) is an alliance of 13 militant networks based in the Federally Administered Tribal Area (FATA) and Khyber Pakhtunkhwa Province (KP) in Pakistan.⁷⁷ In 2007, TTP formed to oppose Islamabad's general influence in the FATA and KP and coordinate attacks against the Pakistani military and Coalition forces in Afghanistan. In fact, the emergence of the TTP is largely a function of the increased acceptance of Talibanism in the FATA after the Pakistani government joined the U.S.-led war on terror.⁷⁸ While the group's primary objective is to establish an Islamic Caliphate and enforce Sharia in Pakistan, current and former TTP leaders have been adamant about carrying out attacks against the United States.⁷⁹



Figure 8. Tehrik-i-Taliban Pakistan flag.

Organizational Structure

Despite their name, the TTP and the Afghan Taliban are two distinct organizations with different ideological goals and resources. TTP follows a hierarchical organizational structure based on a 40-member Shura council headed by an emir followed by a senior deputy emir, deputy emir and a general secretary of organizational affairs. TTP, unlike other terror networks, utilize titles and distinction among leaders and followers to run a formalized command-and-control structure. Outside of the top-management-team and other members of the Shura council, TTP leadership is divided across tribal loyalties into separate administrative zones in the FATA. Each administrative zone included a military commander who reports directly to the supreme commander of the local Taliban and the Shura council and several highly departmentalized sub-divisions that execute day-to-day operation (e.g., fundraising, law and order).⁸⁰

Leadership

The first TTP leader, Baitullah Mehsud, died in August 2009 and was succeeded by his cousin and deputy commander, Hakimullah Mehsud. Hakimullah was characterized as an articulate, goal-oriented leader who previously had gained a reputation for his combat skills.⁸¹ For example, Hakimullah was known for his successful raids on Pakistani and NATO troops. Despite reports of Hakimullah preparing to engage in

⁷⁶ *ibid*

⁷⁷ National Counterterrorism Center (2016). Tehrik-E Taliban Pakistan (TTP). Retrieved from: <https://www.nctc.gov/site/groups/ttp.html>

⁷⁸ Sharma. & Behera (2013)

⁷⁹ *Ibid*

⁸⁰ *Ibid*

⁸¹ (2013, November 2). Profile: Hakimullah Mehsud. *Aljazeera*. Retrieved from <http://www.aljazeera.com/news/asia/2010/01/2010131141229794395.html>

peace talks with the Pakistani Government, he was killed in a drone strike in November 2013.⁸² Thereafter, the TTP's Shura council met and named Mullah Fazullah as the group's leader. Dubbed "Mullah FM Radio," Fazlullah is a ruthless military leader and ideological hard-liner who became known for broadcasting his fiery anti-Western, anti-Islamabad sermons over his unauthorized FM radio channel.⁸³ Prior to being appointed emir, Fazullah controlled an armed faction of the TTP in the Swat Valley. Fazullah harsh tactics as a military leader include a 2012 attempted assassination of education rights activist, Malala Yousafzai, and frequent attacks on tourists in the region.⁸⁴ Under Fazullah is the current deputy emir of the TTP, Sheikh Khalid Haqqani. Haqqani is an intellect and religious scholar who was a close confidante of Hakimullah Mehsud.⁸⁵ Like Fazlullah, Haqqani is also a ruthless military leader. While there is no denying that Fazlullah is the definable leader of the TTP, Haqqani is important due to his connections to regional tribes and role as the "functional head" of the TTP when Fazlullah is in neighboring Afghanistan.⁸⁶

Recruitment and Fundraising

In our dataset, TTP rates highly in terms of its overall effectiveness in recruitment and use of novel recruitment tactics. TTP leaders also enhance recruitment goals through the use of novel tactics such as broadcasting over FM radio stations set up in the FATA. These broadcasts reach a wider audience compared to other recruitment tactics and contain powerful messages since they are unregulated.⁸⁷ Last, TTP is also known to heavily recruit vulnerable populations from the FATA and KP regions. For example, the TTP often scouts for children from poor families in rural Pakistan to indoctrinate and train as Jihadi warriors. Many recruits also express wanting to join the TTP to take revenge against Americans who killed one of their significant others in a bombing or drone strike.⁸⁸ Thus, U.S. aggression in Pakistan and western Afghanistan is likely to sustain a readily available recruiting pool for the TTP.

TTP mainly relies on illegal activities to secure funds for the groups. For example, one report suggests that the nearly half of the TTP's annual budget comes from Afghan drug trade, kidnapping for ransom, and bank robberies. TTP often charges smugglers from Afghanistan's lucrative heroin trade for "safe passage" through FATA. TTP also routinely employs "Commando squads" to target businessmen, soldiers, and government employees for kidnapping for ransom.⁸⁹ The remainder of TTP's funding portfolio relies on donations from other VEOs, such as al-Qa'ida, and charities. TTP and al-Qa'ida have been said to have a "symbolic relationship" in which the TTP draws on al-Qa'ida for ideological guidance and al-Qa'ida relies on TTP's safe havens in the Pashtun area.⁹⁰ As of now, TTP's community relationship and ties to al-Qa'ida make for effective short-term and long-term funding streams. However, TTP's use of brutal punishments and psychologically destructive acts to spread fear could potentially turn away sympathizers and work against the organization's long-term goals.

⁸² Laub, z. (2013, November 18). Pakistan's New Generation of Terrorists. *Council on Foreign Relations*. Retrieved from: <http://www.cfr.org/pakistan/pakistans-new-generation-terrorists/p15422>

⁸³ Khattak, D. (2013, November 8). Who is Mullah Fazlullah. *Foreign Policy*. Retrieved from <http://foreignpolicy.com/2013/11/08/who-is-mullah-fazlullah/>

⁸⁴ 2013 NCTC report detailed this assassination attempt

⁸⁵ Javed, S. (2014, February 27). TTP Profile Series: Khalid Haqqani. *Pakistan Ka Khuda Hafiz*. Retrieved from <http://www.pakistankakhudahafiz.com/conflicts/ttp-profile-series-khalid-haqqani/>

⁸⁶ (2013, November 14). Khalid Haqqani to lead TTP as functional head. *The News*. Retrieved from <https://www.thenews.com.pk/archive/print/634251-khalid-haqqani-to-lead-ttp-as-functional-head>

⁸⁷ Sharma. & Behera (2013)

⁸⁸ Ibid

⁸⁹ Ibid

⁹⁰ Philip C. (Sept 1, 2010). "Designations of Tehrik-e Taliban Pakistan and two senior leaders". Press Release. State Department.

Attack Profile

Under Hakimullah Mehsud, TTP attacks were much more unique, often requiring some degree of expertise and coordination compared to the violence perpetrated by Mullah Fazlullah. For example, Hakimullah claimed responsibility for a failed bombing on New York City's Time Square in May 2010 and a 2009 suicide bomb attack that killed seven CIA employees in Afghanistan. In comparison, Mullah Fazlullah frequently carries out violence against symbolic targets or disrupts important processes. For example, the TTP often targets Pakistani police, military, or government officials using ambush-style attacks and/or suicide bombings. These types of attacks also explain why TTP attacks are highly executed under Fazlullah. Outside of stockpiling various types of firearms and explosives, the TTP reportedly also has access to over 200 liters of hazardous material that could be used to contaminate water reservoirs as well as materials that could be used to create a small, crude nuclear bomb.⁹¹ As such, the TTP has the potential to perpetrate massive damage on a regional or even global scale.

Jabhat Fateh al-Sham

Overview

Jabhat Fateh al-Sham is a Salafi-jihadist terrorist organization and one of the most powerful militant groups fighting the Assad regime as part of the Syrian Civil War.⁹² Jabhat Fateh al-Sham's goal is to overthrow the Assad regime and implement a unified Islamic government in Syria. Prior to adopting the name Jabhat Fateh al-Sham, the group went under the alias Jabhat al-Nusra (Nusra Front). The former Nusra Front was formed in 2011 when the leader of al-Qa'ida in Iraq (currently Da'esh), Abu Bakr al-Baghdadi, sent Abu Muhammad al-Julani to organize jihadist cells in Syria.⁹³ In Syria, Nusra Front quickly rose to prominence and achieved several key military victories against the Assad regime. However, in 2013, the group's relationship with Da'esh began to deteriorate as Nusra Front leadership rejected Baghdadi's claims that the two organizations had merged to form the Islamic State in Iraq and Syria (ISIS).⁹⁴ While rejecting Da'esh, Nusra Front leaders also proclaimed their allegiance to al-Qa'ida and Ayman al-Zawahiri during this time. As part of their strategic rebranding campaign, Nusra Front severed ties with al-Qa'ida in July 2016 and adopted their current name, Jabhat Fateh al-Sham.⁹⁵



Figure 9. Jabhat Fateh al-Sham flag.

Organizational Structure

Jabhat Fateh al-Sham is much more secretive about its organizational structure compared to other VEOs. However, reports suggest that a hierarchical leadership team included a head emir and a small consultative council, the Majlis-ash-Shura, leads the group.⁹⁶ Jabhat Fateh al-Sham also relies on regionalized units due to their relatively high degree of deterritorialization. These regional branches are equipped with an overall leader, a military commander, and a religious leader.⁹⁷ Jabhat Fateh al-Sham is a highly formalized group and uses titles and distinctions to denote status. Potential recruits are required

⁹¹ Musa K.J. (Oct 3, 2013). "The prospect of jihad in South Asia." *Daily Times*.

⁹² Morell, M. (2015, September) fourteen years and counting: the evolving terrorist threat. *CTC Sentinel*, 1-4.

⁹³ Ibid.

⁹⁴ Crenshaw, M. (2015). Jabhat Fateh al-Sham. *Mapping Militant Organizations*. Retrieved from <http://web.stanford.edu/group/mappingmilitants/cgi-bin/groups/view/493>

⁹⁵ Ibid.

⁹⁶ Nusra Front. (n.d.) *Countering Extremism Project*. Retrieved from <https://www.counterextremism.com/threat/nusra-front-jabhat-fateh-al-sham>

⁹⁷ Ibid.

to show a voucher on behalf of the recruit from two commanders in able to join. Recruits are also required to take extensive religious and combat training prior to their official involvement.⁹⁸

Leadership

Since the group's formation, Abu Muhammad al-Julani has operated as the head emir of Jabhat Fateh al-Sham. Unlike his rivals, Julani is a pragmatic leader trying to establish Jabhat Fateh al-Sham as legitimate political factor in Syria without abandoning its long-term goals.⁹⁹ In effect, Julani has prioritized becoming an alternative to the Assad regime by attempting to gain support from local populations as well as other militant groups in Syria. In 2015, for example, Julani attempted to merge Jabhat Fateh al-Sham with other local groups (e.g., Ahrar al-Sham) into a larger coalition.¹⁰⁰ Although the merger was eventually spurned, this demonstrates Julani's attempts to make regional advances through incrementally gaining local support. In addition, this highlights the stark difference between Julani's pragmatic leadership style and Baghdadi's ideological leadership style.

Sami al-Oraidi is currently the second-in-command and Jabhat Fateh al-Sham's main Sharia authority. Al-Oraidi frequently uses social media to vilify Da'esh and endorse sermons and statements on behalf of the group.¹⁰¹ Maysar Ali Musa Abdallah al-Juburi and Abdallah Muhammad bin-Sulayman al-Muhaysini are also fundamental members of Jabhat Fateh al-Sham "inner leadership circle." Al-Juburi is a top religious and military commander in Eastern Syria. Al-Muhaysini has previously served as a religious advisor and is known for raising "millions of dollars" for the Jabhat Fateh al-Sham's effort in Idlib Province, Syria.¹⁰² Ashraf Ahmad Fari al Allak and Abdul Jashari are two important military advisors/commanders for Jabhat Fateh al-Sham. Ashraf Ahmad Fari al Allak is the emir of Saraya and Dara City, Syria and also serves as the military commander for that region. Abdul Jashari was appointed the head of Nusra's military operations in 2014 and continues to lead operations in Northern Syria.¹⁰³ Finally, Hajji Rasoul is the head of Jabhat Fateh al-Sham's civilian program, which provides essential services to areas it has liberated.¹⁰⁴

Recruitment and Fundraising

Jabhat Fateh al-Sham is both novel and effective at recruiting. In fact, Jabhat Fateh al-Sham is said to be only second to Da'esh at recruiting foreign fighters. Like their competition, Jabhat Fateh al-Sham relies on social media, particularly its media branch, al-Manara al-Bayda, to reach out and recruit online. Al-Manara al-Bayda also maintains the group's image and disseminates information on their behalf. Much of Jabhat Fateh al-Sham success at recruiting can also be attributed to their financial capital. More

⁹⁸ Hayden, S. (2015, November 11). In Photos: Inside the al Nusra Academy Training the Next Generation of Jihadis. *Vice News*. Retrieved from: <https://news.vice.com/article/in-photos-inside-the-al-nusra-academy-training-the-next-generation-of-jihadis>

⁹⁹ (2014, January 4). Abu Muhammad al-Julani, head of the Al-Nusra Front, the branch of Al-Qaeda in Syria, gave a rare interview in which he tried to show pragmatism without abandoning the organization's extreme jihadist nature and objectives. *Meir Amit Intelligence and Terrorism Information Center*. Retrieved from: http://www.terrorism-info.org.il/Data/articles/Art_20608/E_213_13_782772575.pdf

¹⁰⁰ (2015, September 11). Al-qaida plays the long game in Syria. Retrieved from: <https://www.ctc.usma.edu/posts/al-qaida-plays-a-long-game-in-syria>

¹⁰¹ Counter Extremism Project (n.d.) Sami al-Oraidi. Retrieved from <http://www.counterextremism.com/extremists/sami-al-oraidi>

¹⁰² Joscelyn, T. C. (2016). US Treasury designates Saudi jihadist cleric, three others in Syria. *Long War Journal*. Retrieved from <http://www.longwarjournal.org/archives/2016/11/us-treasury-designates-saudi-jihadist-cleric-three-others-in-syria.php>

¹⁰³ *ibid*.

¹⁰⁴ Sherlock, R. (2013, February 8). Syria: how jihadist group Jabhat al-Nusra is taking over Syria's revolution. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/news/worldnews/middleeast/syria/9857846/Syria-how-jihadist-group-Jabhat-al-Nusra-is-taking-over-Syrias-revolution.html>

specifically, Jabhat Fateh al-Sham and similar well-funded groups are able to pay for members' salaries, weapons, and/or travel.¹⁰⁵

Jabhat Fateh al-Sham's has an extensive funding portfolio and draws from both legal and illegal revenue streams. For example, the enforcement of taxes, tariffs, and fines on local populations is the group's most stable funding source.¹⁰⁶ Jabhat Fateh al-Sham also relies on private donations from individuals across the Arabian Peninsula.¹⁰⁷ After a 2014 financial crisis stemming from losing control of an oil field, Jabhat Fateh al-Sham decreased their reliance on oil sales as a funding stream. Instead, the group became more heavily involved in other criminal activities such as smuggling, extortion, and kidnapping for ransom.¹⁰⁸ While this move enhanced Jabhat Fateh al-Sham's short-term fundraising goals, these activities may not be suitable for the long-term sustenance.

Attack Profile

Jabhat Fateh al-Sham primarily targets government forces or supporters of Assad's regime. Although they have engaged in formal military operations, the majority of Jabhat Fateh al-Sham's attacks involve car bombs and suicide bombings. In our dataset, Jabhat Fateh al-Sham rates highly in terms of the coordination, execution, scope, and expertise required for their attacks. This is a product of Jabhat Fateh al-Sham's intensive recruitment process and ability to secure highly skilled fighter with a range of expertise. Jabhat Fateh al-Sham is also said to have a diverse weapons cache built through purchases from Iraqi arms dealers and overtaking state-sponsored groups in Syria.

Boko Haram

Overview

Created in 2002, Boko Haram, which calls itself Jama'atu Ahl as-Sunnah li-Da'awati wal-Jihad, is an Islamist separatist group seeking to establish an Islamic state in Nigeria.¹⁰⁹ Boko Haram and its leaders follow a fundamental, Salafist interpretation of Islam, with a specific focus on denying and abolishing Western influence and establishing Sharia law in Nigeria.¹¹⁰ Previously, Boko Haram was considered related to al-Qa'ida due to its ties with al-Qa'ida in the Islamic Maghreb (AQIM), Al-Shabaab, and al-Qa'ida in the Arabian Peninsula (AQAP), but its leadership pledged bayat (allegiance) to



Figure 10. Boko Haram symbol.

¹⁰⁵ Ghanem, M. A. (2012, December 27). Taking Syria back from the extremists, *The Washington Post*. Retrieved from https://www.washingtonpost.com/opinions/taking-syria-back-from-the-extremists/2012/12/27/2b6ce1a6-3d96-11e2-ae43-cf491b837f7b_story.html?utm_term=.a92f879ff2b6; National Counterterrorism Center (2016). Boko Haram. Retrieved from: https://www.nctc.gov/site/groups/boko_haram.html

¹⁰⁶ Triebert, C., & Komar, R. (2016). Jabhat Fateh al-Sham's income and resources. *Hate Speech International: Investigating Extremism*. <https://www.hate-speech.org/jabhat-fateh-al-shams-income-and-resources-an-open-source-investigation/#fn-2879-45>

¹⁰⁷ Counter Extremism Project (n.d.) Nusrah Front. Retrieved from <https://www.counterextremism.com/threat/nusra-front-jabhat-fateh-al-sham>

¹⁰⁸ Crenshaw, M. (2015). Jabhat Fateh al-Sham. *Mapping Militant Organizations*. Retrieved from <http://web.stanford.edu/group/mappingmilitants/cgi-bin/groups/view/493>

¹⁰⁹ Sergie, M., & Johnson, T. (2015). CFR Backgrounders: Boko Haram. *Council on Foreign Relations*, Retrieved from <http://www.cfr.org/nigeria/boko-haram/p25739>

¹¹⁰ Ibid, 1-2.

Abu Bakr al-Baghdadi and Da'esh in 2015.¹¹¹ Despite the ties to globally focused jihadi groups, Boko Haram appears to be regionally focused with a majority of attacks perpetrated in Nigeria and a small minority taking place in the neighboring countries of Chad, Cameroon, and Niger.¹¹² Boko Haram did not become exclusively focused on using violent tactics to overthrow the Nigerian government until 2009 after key clashes between Muslims and Christians, and between Boko Haram members and police forces.¹¹³ Following the extrajudicial killing of Mohammed Yusuf, the founder of Boko Haram, and an uprising in multiple northern Nigerian states Boko Haram was largely pushed into the rural areas in which their attacks became much crueler.¹¹⁴ Boko Haram is known for killing and pillaging whole villages, attacking schools and killing students, and attacks on health workers. One of their most notable attacks was the kidnapping of 200 girls in 2014.¹¹⁵ Since that attack some of the girls have escaped, are still being held, or have been forced to commit suicide attacks.¹¹⁶

Organizational Structure

Boko Haram is a hierarchical organization in which majority of its operations are conducted in Nigeria, with some attacks spilling into the neighboring countries of Chad, Cameroon, and Niger.¹¹⁷ Furthermore, it is a highly departmentalized organization in which its units are co-dependent on one another for its continued operations. More specifically, Shekau is the key figurehead of the group and directs the Shura council.¹¹⁸ Each member of the Shura council directs specific departments of the group.¹¹⁹ While Boko Haram clearly distinguishes members amongst different ranks, it does not heavily rely on titles to espouse these distinctions.

Leadership

Currently, there is a debate concerning who is the leader of Boko Haram. In August 2016, Da'esh claimed to have appointed Sheik Abu Mossab al Bornawi as the commander of their Nigerian wing, but Shekau and his followers have contradicted this claim. Abubakar Shekau has been the leader of Boko Haram since 2009, but his leadership has always been met with struggles due to his authoritarian style and cruelty and targeting of civilians.¹²⁰ Specifically, a previous deputy, Mamman Nur, split from Shekau and formed Ansaru in 2012.¹²¹ Shekau has been known to kill defectors and moderately committed members of the organization.¹²² Shekau is rated by our teams as a charismatic leader and socialized leader. Despite his power struggles, Shekau is regularly credited with attacks perpetrated by the group, demonstrating he is still clearly defined as the leader of the organization.

¹¹¹ Pate, A. (2015). Boko Haram: An Assessment of Strengths, Vulnerabilities, and Policy Options, National Consortium for the Study of Terrorism and Responses to Terrorism. Retrieved from https://www.start.umd.edu/pubs/START_%20SMA_AFRICOM_Boko%20Haram%20Deep%20Dive_Jan2015.pdf. Sergie and Johnson (2015).

¹¹² Ibid, 1-2

¹¹³ Ibid, 2.

¹¹⁴ Ibid, 2.

¹¹⁵ Ibid, 2.

¹¹⁶ Sleff, K. (2016, April 14). Boko Haram kidnapped 276 girls two years ago. What happened to them? *The Washington Post*. Retrieved from https://www.washingtonpost.com/news/worldviews/wp/2016/04/14/boko-haram-kidnapped-276-girls-two-years-ago-what-happened-to-them/?utm_term=.63c37c09badd

¹¹⁷ Sergie, M., & Johnson, T. (2015). CFR Backgrounders: Boko Haram. *Council on Foreign Relations*, Retrieved from <http://www.cfr.org/nigeria/boko-haram/p25739>

¹¹⁸ Blanchard, L. P. (2016, March 29). Nigeria's Boko Haram: Frequently asked Questions. *Congressional Research Service*. Retrieved from: <https://fas.org/sgp/crs/row/R43558.pdf>

¹¹⁹ Pate (2015), 15.

¹²⁰ Zenn, J. (2014) "Leadership Analysis of Boko Haram and Ansura in Nigeria. *CTC Sentinel*, 7. Retrieved from <https://www.ctc.usma.edu/v2/wp-content/uploads/2014/02/CTCSentinel-Vol7Iss2.pdf>

¹²¹ Ibid, 2.

¹²² Ibid, 2.

Recruitment and Fundraising

Boko Haram uses a variety of tactics to fill its ranks. First, Boko Haram pays individuals to commit violent and property crimes in their name and to join the group, especially impoverished children.¹²³ Boko Haram particularly focuses on individuals lacking education, wealth, or marketable skills. Outside of financial incentives, Boko Haram regularly recruits amongst the religious individuals who are sympathetic to their cause, due to the tension between Christians and Muslims in Nigeria, and amongst the peers and families of their current members.¹²⁴ Finally, Boko Haram is known to force individuals to join their ranks, including kidnapping individuals to perpetrate attacks, such as suicide bombings.¹²⁵ Boko Haram's recruitment tactics are considered unique and novel in comparison to the other organizations within LEADIR data.

Boko Haram's most notable funding stream is their engagement in illicit arms trafficking and consumption. Boko Haram is considered a significant player in arms trafficking within Nigeria, but it is unknown whether they are a player outside of the country.¹²⁶ Outside of arms trafficking, Boko Haram engages in extortion, robbery, looting, and kidnapping to acquire monetary and other resources for the organization. "Protection" money and threats of harm if one does not "donate" to the organization are some of the ways Boko Haram extorts politicians and businesses in Nigeria.¹²⁷ Meanwhile through bank robberies in certain regions and looting of the towns they attack, Boko Haram has been able to funnel a significant amount of money into the organization. Finally, ransoms received from kidnappings are the largest funding stream for the organization.¹²⁸ Extortion, robbery, looting and kidnapping tactics allow for significant revenue that can sustain the organization for the short term, while their trafficking activities ensures financial stability for the length of the organization's existence.

Attack Profile

Per our findings, Boko Haram attacks soft or unexpected targets such as educational institutions, health workers, and civilians.¹²⁹ Furthermore, on average their attacks, excluding a few unique attacks do strongly further the organization's stated causes or appear to conform to their ideology to overthrow the Nigerian government. On average their attacks cause minimal damage to infrastructure, and do not halt or largely affect a key societal process. Finally, on average their attacks involved two persons or more, are tied to at most one other attack, involves the use of firearms, melee, and other "easier" to use weapons, yet are known to be extremely cruel.

¹²³ Campbell, J. (2013, April 16). Africa in Transition: Boko Haram Recruitment Strategies. *Council on Foreign Relations*. Retrieved from <http://blogs.cfr.org/campbell/2013/04/16/boko-haram-recruitment-strategies/>

¹²⁴ Ibid, 2.

¹²⁵ Ibid, 2.

¹²⁶ Pate (2015).

¹²⁷ Ibid, 24-25.

¹²⁸ Pate (2015).

¹²⁹ Blanchard (2016).

Abu Sayyaf Group

Overview

Abu Sayyaf Group (ASG) is a militant separatist group seeking to establish an independent state for the Moro people, a Muslim minority, in the Western Mindanao and the Sulu Archipelago regions of the Philippines.¹³⁰ Abu Sayyaf Group was founded by Ustadz Abddurajack Janjalani in 1991, after breaking away from the Moro National Liberation Front.¹³¹ The group does not hold global aspirations and only seeks to banish non-Islamic influences within the Philippines.¹³² This cause has prevented the group from engaging in peace talks with the Filipino government until 2016. Yet President Duterte, the current president of the Philippines does not want to engage in peace talks with the group.¹³³ Despite its local focus, Abu Sayyaf has had financial and operational ties to multiple organizations including al-Qa'ida, Hezbollah, and Jamaah Islamiya.¹³⁴ Abu Sayyaf at one point was the most prominent terrorist organization in the Philippines, known for their kidnapping attacks and attacks on the maritime domain.¹³⁵ The group has experienced multiple periods of decline due to a strong military and governmental campaign against the group.¹³⁶



Figure 11. Abu Sayyaf Group flag.

Organizational Structure

Abu Sayyaf Group has held both hierarchical and cellular structures throughout its history, dependent on its leader. Its first leader, Janjanlani had sought to establish a strongly hierarchical, highly departmentalized organization in which each unit was moderately co-dependent on one another. Also under Janjanlani, ASG was mostly based in the Mindanao region, but had operations on multiple islands in the Philippines. Under Galib Andang,¹³⁷ from 1998-2003, ASG was a cellular group in which two leaders directed operations on Sulu and Basilan islands in the Philippines.¹³⁸ Furthermore, smaller subgroups operated independent, smaller-scale operations within these two regions leading to a total of 26 factions.¹³⁹ Due to the cellular nature of the group there were very few set units to perform specific tasks, leading to members sharing most tasks, and each unit being able to operate with or without the members placed in other units. Afterwards, between 2004 and 2006, Khaddafy Janjalani consolidated leadership and restored the hierarchical structure with two key headquarters.¹⁴⁰ Under Khaddafy the

¹³⁰ Crenshaw, M. (2015). Abu Sayyaf Group. *Mapping Militant Organizations*. Retrieved from <https://web.stanford.edu/group/mappingmilitants/cgi-bin/groups/view/152>

¹³¹ Banlaoi, R. C. (2006). The Abu Sayyaf Group: from mere banditry to genuine terrorism. *Southeast Asian Affairs*, 247-262.

¹³² START. (2015). Abu Sayyaf Group. *Project on Violent Conflict*. Retrieved from <http://www.start.umd.edu/baad/narratives/abu-sayyaf-group-asg>

¹³³ Macas, T., (2016, September 27). Duterte rejects Misauri's proposal to include Abu Sayyaf in talks, amnesty. *GMA News*. Retrieved from <http://www.gmanetwork.com/news/story/582960/news/nation/duterte-rejects-misuari-s-proposal-to-include-abu-sayyaf-in-talks-amnesty>

¹³⁴ Crenshaw (2015).

¹³⁵ Filler, A. L. (2002). The Abu Sayyaf Group: a growing menace to civil society. *Terrorism and Political Violence*, 14:4, 139.

¹³⁶ Abuza, Zachary, 2008, "The Demise of the Abu Sayyaf Group in the Southern Philippines, *CTC Sentinel*, 1.

¹³⁷ From 1998-2003, ASG split into several factions, with two main leaders. Due to the nature of our dataset, one leader was chosen as the "leader" of the organization for this period. We chose Galib Andang as the representative because he consolidated power within his geographical area despite not being appointed to a leadership role, demonstrating he had more power than Khaddafy-the other leader. Furthermore, Khaddafy consolidated power after Andang was killed, and we were still able to capture his influence on the organization.

¹³⁸ Banlaoi (2006).

¹³⁹ Ibid.

¹⁴⁰ Banlaoi (2006).

units continued to share tasks and were loosely co-dependent on each other. Finally, under Radulah Sahiron, from 2006 to present, ASG is considered a cellular group in which multiple factions perpetrate attacks throughout the Philippines. Sub-commanders within different regions direct attacks in their specific geographical area, and the fall of one subgroup would diminish operations within a specific region, but would not diminish the existence of the organization. Under all four leaders, ASG sent fighters to receive training from other groups, but did not operate its own training camps and had little distinction of rank and titles amongst the members.

Leadership

During its height of power, ASG had four leaders. The founder, Ustadz Abdurajak Janjalani was deeply ideological, socialized leader who had received formal education and training in Islamic thought and jurisprudence.¹⁴¹ Furthermore, prior to his death he delivered eight speeches detailing his ideological views and bemoaned Moros and Muslim scholars for inadequately interpreting the Quran or practicing Islam inappropriately.¹⁴² When he broke away from the Moro National Liberation Front, Janjalani sought to create a group that sought justice for Muslims and the establishment of an Islamic state that could only be accomplished through jihad.¹⁴³ Janjalani held a hatred towards Christian missionaries in the Philippines and believed that violent actions were justified against them.¹⁴⁴ Despite, advocating for violence, Janjalani was the only ASG leader who was not depicted with weapons, indicating somewhat of a pragmatic, non-violent stylistic choice of displaying leadership. Janjanlani became friends with Osama bin Laden after traveling to Pakistan in 1988.¹⁴⁵ This friendship lead to significant funding from al-Qa'ida in the Arabian Peninsula and bin Laden's brother's nonprofit organization.¹⁴⁶ During his reign Janjalani held almost total control over the behaviors of the organization and sought to construct an extremely well-disciplined organization with multiple branches and units running the daily operations and tactical training of units.¹⁴⁷ Janjalani was killed in 1998, which did not allow for his plan to come to fruition.¹⁴⁸ From 1999-2003, ASG became a cellular organization with Khadaffy Janjalani and Galib Andang running the Basilan and Sulu factions, respectively. Khadaffy was originally appointed to run the organization following his brother's death, but he was unable to consolidate power adequately. The ASG spokesperson, Aldam Tilao, overpowered Khadaffy and became the de facto leader of the Basilan faction. There is little information available concerning how Andang and Tilao ran their factions. During this period, ASG was extremely fractured into multiple sub-groups that acted almost exclusively independent of one another.

Furthermore, certain groups claimed to be part of ASG to gain prestige, without much affiliation with the radical jihadist ideology or official membership processes.¹⁴⁹ Furthermore, during this period ASG appeared to behave more as a large criminal organization which heavily used kidnap for ransom operations for fundraising and recruitment purposes.¹⁵⁰

Following the deaths of Andang and Tilao, Khadaffy consolidated power and became the sole, defined leader of ASG in 2003. Khadaffy aimed to run the organization per its first iteration under his brother.

¹⁴¹ Ibid, 251.

¹⁴² Ibid, 251

¹⁴³ Ibid, 251

¹⁴⁴ Ibid, 252.

¹⁴⁵ Ibid, 251

¹⁴⁶ Ibid, 249

¹⁴⁷ Ibid, 252

¹⁴⁸ Ibid, 252

¹⁴⁹ Ibid 252-253.

¹⁵⁰ Abuza, Z. (June 2008). The Demise of the Abu Sayyaf Group in the Southern Philippines. *CTC Sentinel*.1. Retrieved from <https://www.ctc.usma.edu/v2/wp-content/uploads/2010/06/Vol1Iss7-Art4.pdf>

Khadaffy focused on increasing the capabilities of the organization by allowing for different training opportunities for members. This included bomb training under ASG leadership and from other organizations, such as Jamaah Islamiya.¹⁵¹ While Khadaffy subscribed to the ideological leadership style, he was a much more personalized leader.¹⁵²

Khadaffy was killed in 2006, leading to the rise of Radulah Sahiron, also known as Commander Putol, as the leader of ASG. Under Sahiron, ASG is once again a much more cellular based group. Due to strong military campaigns against the group, ASG has returned to mostly conducting high profile kidnapping activities.¹⁵³ Presently, Radulah Sahiron is a leader mostly in name. While ASG attacks are attributed to Sahiron, he has been in hiding for multiple years, and there have been multiple instances of members being killed while trying to protect him.

Recruitment and Fundraising

ASG mostly recruits among the Moro religious minority and uses propaganda and financial compensation to bolster its ranks. ASG typically recruits through social events such as sporting games and marijuana use sessions. Furthermore, ASG invites young people to bring their own weapons and take pictures with members, and uses those pictures to blackmail young males to join the organization. The organization also use marriages in its recruitment efforts, but there is little information on the operational role women play in the organization.¹⁵⁴

ASG is exclusively funded through kidnap for ransom operations, funding from other organizations, extortions, smuggling and drug sales (specifically, marijuana).¹⁵⁵ Furthermore, the organization receives a significant amount of financial and armament support from the Moro population.¹⁵⁶ After losing the financial support of al-Qa'ida and other groups, ASG's fundraising tactics provide a significant amount of money for the near term, but is not a sustainable funding stream. Kidnap for ransoms, extortions, and smuggling are operations that must be consistently initiated to sustain the organization.

Attack Profile

ASG targets the Filipino government, Christian missionaries, and foreigners in their struggle to establish a Muslim independent state. Many of their attacks are moderately successful and unlikely to be linked to another attack. Their attacks do not require much coordination in number of members or tactics, and ASG uses common, easily operated weapons such as firearms and knives to orchestrate assassinations, beheadings, kidnappings and extortion. Meanwhile, through training with Jemaah Islamiyah operatives and a dedicated "bomb-maker" within the group, ASG has also been known to use car bombs and suicide bombs. Additionally, due to the background of the members, ASG makes use of their maritime familiarity to attack civilians within the maritime domain.¹⁵⁷ ASG typically targets soft targets such as civilians or tourists who have very little security. Also, their attacks moderately conform to their ideology but rarely allow for accomplishing their cause. Finally, despite some attacks on politicians and military, most the ASG's attacks do not affect a significant societal process and rarely damage infrastructure.

¹⁵¹ Banloai (2006).

¹⁵² Ibid, 254-255

¹⁵³ Abuza (2008).

¹⁵⁴ Banloai (2006).

¹⁵⁵ Crenshaw (2015).

¹⁵⁶ Banloai (2006).

¹⁵⁷ Ibid.

Al-Shabaab

Overview

Al-Shabaab is a terrorist organization that subscribes to Wahabist Islam, based in Somalia. Al-Shabaab is a descendent of Al-Ittihad Al-Islami (AIAI), a terrorist group in Somalia, with leaders fighting in Afghanistan since the late 1990s.¹⁵⁸ The more radical leaders became Al-Shabaab circa 2003.¹⁵⁹ Al-Shabaab's affiliation to al-Qa'ida was made apparent between 2006 and 2008.¹⁶⁰ AIAI was partly funded by Osama bin Laden during its more militant existence, and this funding continued once the militant successors formed Al-Shabaab. Al-Shabaab was originally "formed as a militant wing of the Islamic Courts Union."¹⁶¹ Due to its al-Qa'ida ties, Al-Shabaab has stated that it plans to attack outside of surrounding African territories such as in the United States and within Europe, and there was at least one instance of an inspired attack taking place in Britain. Furthermore, Al-Shabaab was the most significant recipient of foreign fighters worldwide between 2007 and start of the civil war in Syria. Al-Shabaab's most prominent goals are to establish an Islamic state, implement Sharia law, and drive out Western or "crusader" influence out of the Somali region.¹⁶² The majority of al-Shabaab's attacks take place in Somalia, especially in the capital Mogadishu, but due to Kenya's participation in military operations against al-Shabaab, Kenya has been the site of major al-Shabaab operations. Some of these operations include the Westgate mall attack in Nairobi in 2013 and the attack on a university in Garissa in 2015.¹⁶³ Al-Shabaab has also staged attacks in Uganda and Djibouti.¹⁶⁴ To achieve its goals al-Shabaab typically targets governmental agents, state and joint military units, and any person that can be affiliated with Western influence such as journalists, private citizens, police, and international aid workers. Al-Shabaab has one of the more effective propaganda machines in the global jihad industry and fares better than most groups in the production value of their messaging.¹⁶⁵ Furthermore, al-Shabaab was one of the first groups to use social media, specifically Twitter, to spread their message. During the Westgate mall attack, al-Shabaab live tweeted the event. Al-Shabaab is the most prominent al-Qa'ida affiliate within the Horn of Africa and continues to be the most prominent terrorist organization in the region.



Figure 12. Al-Shabaab flag.

Organizational Structure

Al-Shabaab is a loose, hierarchically structured organization in which an emir directs a Shura council made up of multiple branches including regional commanders.¹⁶⁶ Each regional division has military and administrative wings.¹⁶⁷ While the emir runs the Shura council of the organization, the regional officers

¹⁵⁸ START. (2015). Al-Shabaab. *Project on Violent Conflict*. Retrieved from <http://www.start.umd.edu/baad/narratives/al-shabaab>. Masters, J., & Sergie, M. A. (2015, March 13). CFR Backgrounders: Al-Shabaab, Council for Foreign Relations. Retrieved from <http://www.cfr.org/somalia/al-shabab/p18650>

¹⁵⁹ Masters & Sergie (2015).

¹⁶⁰ Ibid

¹⁶¹ START (2015).

¹⁶² Masters & Serge (2015).

¹⁶³ Kimenyi, M. S. (2015, April 3). Al-Shabaab reborn: armed, lethal and radicalized. *Brookings Institute*, Retrieved from <https://www.brookings.edu/blog/africa-in-focus/2015/04/03/al-shabab-reborn-armed-lethal-and-radicalized/>.

¹⁶⁴ Masters and Sergie (2015).

¹⁶⁵ Jones, S. G. (2013). The Terrorist Threat from Al Shabaab. *RAND Corp*. Retrieved from http://www.rand.org/content/dam/rand/pubs/testimonies/CT400/CT400/RAND_CT400.pdf

¹⁶⁶ Shuriye, A. O. (2012, May 7). Research: Al-shabaab's leadership hierarchy and its ideology, *Horn Affairs English*. Retrieved from <http://hornaffairs.com/en/2012/05/07/research-al-shabaabs-leadership-hierarchy-and-its-ideology/>.

¹⁶⁷ START (2015).

can take actions and make decisions without the approval of the emir or the Shura council.¹⁶⁸ Each department or unit has its own mission and is loosely dependent on the others for the continuation of the organization.¹⁶⁹ Throughout its history, al-Shabaab has held territory in Somaliland, in which they instituted Sharia law.¹⁷⁰ For example, in territories it governed, al-Shabaab provided services to those under its control, but was very restrictive in the behaviors of their “constituents.” Those under their rule were unable to drink alcohol, smoke tobacco, or listen to music, and would face extreme punishment for disobeying any law. In one instance a thief’s hands were chopped off as punishment. Beyond its governance abilities, al-Shabaab regularly invested in its fighters by operating its own training camps but clearly defined ranks within its membership by providing titles to those with higher ranks.

Leadership

Ahmed Abdi Godane was the leader of al-Shabaab from 2008 until May 2014, when he was killed in an airstrike. Godane was a strong, authoritarian leader who was openly against the clan system and nationalism.¹⁷¹ Godane’s leadership caused significant rifts in al-Shabaab’s top management team, leading to at least one splinter group and multiple public outcries from other al-Shabaab leaders.¹⁷² Godane was at odds with other leaders over the group’s ideological mission, operational decisions, and accusations of harming foreign fighters.¹⁷³ Godane responded to at least one leader, Omar Hammami, by ordering the killing of Hammami and other foreign fighters believed to have betrayed him.¹⁷⁴ Despite his strained relationship with his leadership team, Godane was understood as a socialized leader. Godane was known for only releasing audio messages, in which he always spoke about the group, its plans and operations, without centering himself as the leader.¹⁷⁵ During his reign Godane was designated as a Specially Designated Global Terrorist by the United States Treasury Department and was regularly credited with al-Shabaab’s operations.¹⁷⁶

After Godane was killed, Ahmad Umar was appointed to lead al-Shabaab. Umar was part of Godane’s inner circle and had been affiliated with al-Shabaab in 1996 when it was still part of AIAI.¹⁷⁷ Umar is known as a harsh punisher of non-Muslims, and it is believed he played a key role in the killing of Omar Hammami and his foreign followers.¹⁷⁸ Umar received an Islamic education in 1996 and held multiple governance positions within al-Shabaab prior to his appointment as Godane’s advisor in 2013.¹⁷⁹ Umar shared similar ideology to Godane in which he saw al-Shabaab and Somalia as a key part within the global jihad industry.¹⁸⁰ Like Godane, Umar is an ideological and socialized leader, but he does not appear to hold as much power as Godane.¹⁸¹ Furthermore, it is likely that Umar is more authoritarian because he subscribes to strict implementation of Sharia. For example, Umar enforces certain rules for humanitarian

¹⁶⁸ Shuriye (2012).

¹⁶⁹ START (2015).

¹⁷⁰ Masters & Sergie (2015).

¹⁷¹ Horadam, N. (2011) Profile: Ahmed Abdi Godane (Mukhtar Abu Zubair, *Critical Threats*. Retrieved from <https://www.criticalthreats.org/analysis/profile-ahmed-abdi-godane-mukhtar-abu-zubair>.

¹⁷² Ibid, 1.

¹⁷³ Ibid, 1-2

¹⁷⁴ Ibid, 1-2.

¹⁷⁵ Ibid, 1

¹⁷⁶ Ibid, 1

¹⁷⁷ Cleaves, S. (2015). Profile: Ahmad Umar (Abu Ubaidah). *Critical Threats*. Retrieved from <https://www.criticalthreats.org/analysis/profile-ahmad-umar-abu-ubaidah>.

¹⁷⁸ Ibid, 1.

¹⁷⁹ Ibid, 1

¹⁸⁰ Ibid, 1

¹⁸¹ START (2015).

organizations, to ensure there is no Western influence in the regions he would govern.¹⁸² Unlike Godane, Umar is regularly pictured with weapons, but this could be due to his previous military leadership positions within the group.

Recruitment and Fundraising

At first, al-Shabaab mostly targeted orphans or estranged students in Islamic schools in Somalia to fill its ranks. Yet, in 2007, al-Shabaab began to focus on an international campaign of recruiting members worldwide, making it the biggest recipient of foreign fighters for many years.¹⁸³ The foreign fighters hailed from multiple nations including the United States, causing grave concern internationally.¹⁸⁴ The size of the Somali diaspora has made it easier to spread their ideology and recruit foreign fighters. In this respect, al-Shabaab differs from its parent al-Qa'ida organization which generally calls for fighters to attack within their own homelands rather than travel to a specified conflict zone. Their foreign fighter campaign has allowed for the recruitment of an estimated several hundred fighters, worldwide.¹⁸⁵ Outside of foreign fighters and orphans, al-Shabaab also forced civilians living in the territories they controlled to fight alongside the group.

The majority of al-Shabaab's funding, financial and resource-based, is from external groups such as al-Qa'ida Central, foreign states, and humanitarian aid. Also, until 2012, al-Shabaab ran a racketeering operation in Kismayo, Somalia.¹⁸⁶ While it no longer holds control over parts of the city, al-Shabaab continues to engage in the illicit charcoal and sugar trade.¹⁸⁷ Furthermore, al-Shabaab engages in piracy, robbery, kidnapping, and extortion, such as protection money for local business, to fund its operations. The diversity of their fundraising stream indicates that al-Shabaab is creative and effective in their fundraising efforts. Furthermore, their various funding sources provide long and short-term financial security for the organization. With each of their sources, al-Shabaab has received monies, arms, training, and even bomb-making materials from their external financiers.

Attack Profile

Al-Shabaab generally targets government officials, military units, police, journalists, foreign aid workers, Christians, and non-Muslims in Somalia and Kenya. Their targeting of police, military units, and government officials satisfies their goals of establishing an Islamic state in Somalia and implementing Sharia law. Meanwhile, targeting journalists, aid workers, and non-Muslims, or civilians generally, satisfies their goal of ridding the Horn of Africa of Western influences. Their largest attacks targeted embassies, military units, and media stations such as the BBC. Al-Shabaab's attacks on average have two to three perpetrators and are tied to at most one other attack. On average their attacks involve moderate coordination and expertise in the implementation or weapons used and cause little damage to infrastructure.

¹⁸² Cleaves, "Profile: Ahmad Umar (Abu Ubaidah)", 1.

¹⁸³ Jones, (2013).

¹⁸⁴ Masters & Sergie (2015).

¹⁸⁵ Jones, (2013).

¹⁸⁶ Masters & Sergie (2015).

¹⁸⁷ Ibid, 4

Al-Qa'ida in the Arabian Peninsula

Overview

Al-Qa'ida in the Arabian Peninsula (AQAP) is the Yemen branch of al-Qa'ida that aims to establish an Islamic state within Yemen and other Arab nations and establish Sharia law as the law of the land.¹⁸⁸ To achieve this goal, AQAP has directly targeted Yemeni government and any perceived Western interests in the Arab world. AQAP is considered one of the most capable branches of al-Qa'ida with its successful Charlie Hebdo attack, the unsuccessful underwear bomber in 2009, and the bombing of the USS Cole in 2000. AQAP officially formed in 2009, after Saudi Arabian and Yemen extremists formed a single group. A descendent of al-Qa'ida in Yemen, AQAP's leadership had direct ties to al-Qa'ida central. Many of AQAP leaders fought alongside Osama bin Laden in Afghanistan against the Soviets, and its first leader, Nasir al-Wahayshi, was once bin Laden's secretary. The group was formed to fix the mistakes of al-Qa'ida in Yemen, seeking to focus on less civilian casualties, garner greater local support, and ensure the group could continue with the loss of leaders. During its existence, AQAP has held swaths of land in Yemen and continues to fight to keep land under its controls. When AQAP has held control over certain cities and towns, AQAP has instilled Sharia law like other groups, but has been less vocal concerning its governance. While some groups openly document and celebrate their social service activities and punishment, AQAP refrains from directly documenting gruesome punishments and is more focused on providing infrastructure and other social services.¹⁸⁹ As reported by Council for Foreign Relations, it is believed that AQAP has formed and largely runs Ansar al-Sharia as a rebranding tactic to continue to garner local support and reshape its image as a less harsh group.¹⁹⁰ To maintain an image of being less harsh than other like-minded groups, AQAP refrains from orchestrating high casualty events against civilians and even apologized for an attack that killed humanitarian aid workers.¹⁹¹ AQAP is most well-known for publishing of *Inspire* magazine, which was at one point the first and most prominent English-language, jihadist propaganda magazine. The publishing of *Inspire* magazine signified a major turn in jihadist propaganda being produced in English-language directly targeting Western audiences, and offering ideological and operational instructions. As Yemen's government remains unstable, AQAP will remain one of the most well-known and capable organizations in the global jihadist industry, and will remain a large target in counterterrorism efforts.



Figure 13. AQAP flag.

Organizational Structure

AQAP is a hierarchical, highly departmentalized organization that is structured in a way that no single leader is responsible for the continued existence of the organization.¹⁹² After observing AQC during its prime, Wuhayshi ensured that AQAP was built to remain resilient to leadership decapitation.¹⁹³ AQAP has

¹⁸⁸ Crenshaw, M. (2015). Al Qaeda in the Arabian Peninsula. *Mapping Militant Organizations*. Retrieved from <http://web.stanford.edu/group/mappingmilitants/cgi-bin/groups/view/19>.

¹⁸⁹ Joscelyn, T. (2016, February 3). AQAP provides social services, implements sharia while advancing in Yemen." *Long War Journal*. Retrieved from <http://www.longwarjournal.org/archives/2016/02/aqap-provides-social-services-implements-sharia-while-advancing-in-southern-yemen.php>.

¹⁹⁰ Ibid

¹⁹¹ CFR.Org staff (2015, June 19). CFR Backgrounders: Al-Qaeda in the Arabian Peninsula. *Council for Foreign Relations*. Retrieved from <http://www.cfr.org/yemen/al-qaeda-arabian-peninsula-aqap/p9369>.

¹⁹² Johnsen, G. D. (2012). A profile of AQAP's upper echelon. *CTC Sentinel*, 5. Retrieved from <https://www.ctc.usma.edu/v2/wpcontent/uploads/2012/07/CTCSentinel-Vol5Iss72.pdf>.

¹⁹³ Johnsen (2012).

a single leader, who is known as the political leader, supported by lieutenant commanders of a military, propaganda, and religious branches.¹⁹⁴ The military branch directs all violent operations including guerilla warfare and other types of attacks.¹⁹⁵ AQAP's military branch operates its training camps, which includes hands-on training and training guides.¹⁹⁶ The propaganda branch is responsible for producing the different media campaigns and increasing recruitment within the organization,¹⁹⁷ while the religious branch is responsible for disseminating fatwas and public statements to justify AQAP's actions. Due to this organizational structure, the commander of the religious branch is considered the spokesman and foremost religious expert for the organization.¹⁹⁸ Succession planning is well established, allowing for strong distinction amongst the different ranks within the membership. Furthermore, each branch can act independently of the other branches. Due to their governance activities, AQAP members are not isolated from the community at any point of their membership within the organization.¹⁹⁹

Leadership

Nasir al-Wuhayshi, leader of AQAP from 2009-2015, was a previous member of al-Qa'ida Central (AQC) and was Osama bin Laden's personal secretary from 1998 to approximately 2001.²⁰⁰ Al-Wuhayshi was very close to bin Laden and used the lessons he learned from working so closely on the inner-workings of al-Qa'ida to guide how he operated and marketed AQAP.²⁰¹ After escaping from prison in 2006 with 22 other operatives and overseeing the formation of AQAP, al-Wuhayshi was declared the main leader of AQAP and was believed to be the second-in-command of AQC.²⁰² Al-Wuhayshi was an ideological, socialized leader who made sure AQAP was committed to fewer civilian casualties and explained the rationale for who or what was considered a legitimate target.²⁰³ Despite depersonalized messaging, al-Wuhayshi held the most power within AQAP, and any attacks perpetrated by the group were directly linked to or credited to al-Wuhayshi. After increased pressure by the U.S. and coalition forces, al-Wuhayshi was killed by an airstrike in 2015.²⁰⁴

Qasim al-Raymi was appointed to lead AQAP following al-Wuhayshi's death.²⁰⁵ Al-Raymi is also an ideological, socialized leader who previously held the position of military commander during al-Wuhayshi's reign.²⁰⁶ Al-Raymi played an integral role in the formation of AQAP and was responsible for fighter movements when AQAP would take over towns.²⁰⁷ Al-Raymi could be described as cunning and well qualified; yet he does not hold as much power over AQAP as al-Wuhayshi did.²⁰⁸ Furthermore, despite his position as military commander, al-Raymi has been pictured less with photographs than al-Wuhayshi. Finally, despite being the military commander, al-Raymi is not as visible of a leader or largely credited with AQAP's operations.²⁰⁹

¹⁹⁴ Counter Extremism Project (n.d.) Al-Qaeda in the Arabian Peninsula. Retrieved from <https://www.counterextremism.com/threat/al-qaeda-arabian-peninsula-aqap>.

¹⁹⁵ Ibid, 2-3

¹⁹⁶ Ibid, 2-3

¹⁹⁷ Ibid, 2-3

¹⁹⁸ Ibid, 2-3

¹⁹⁹ Counter Extremism Project (n.d.)

²⁰⁰ Johnsen (2012).

²⁰¹ Ibid, 2

²⁰² Ibid, 2

²⁰³ CFR.Org staff (2015).

²⁰⁴ Johnsen (2012).

²⁰⁵ Ibid, 3

²⁰⁶ Ibid, 3

²⁰⁷ Ibid, 3

²⁰⁸ Ibid, 3

²⁰⁹ Ibid, 3

Recruitment and Fundraising

AQAP's *Inspire* magazine is one of the flagship English-language jihadi publications and is one of many propaganda magazines AQAP publishes. *Inspire* caters to a Western audience, but AQAP produces other media tailored to Yemeni and other global audiences.²¹⁰ Beyond propaganda, AQAP recruits amongst religious sympathizers in Yemen, peers and family of the members, especially of the leadership. AQAP like other organizations has a strong othering causing them to clash with Houthis. Their clash with the Shia Houthis, whom they view as related to Iran, draws more sympathizers to their ranks in hopes of banishing Iranian and Shia influence in Yemen.²¹¹

AQAP's fundraising is largely based in robberies and kidnappings for ransom, with significant amount of donation and charity support from those living in Yemen. Furthermore, AQAP receives significant international funds from sympathetic Saudis. While robbery and kidnapping for ransom raise significant funds, those fundraising streams are not sustainable and are very destructive. Meanwhile local and international donations to fake charities or otherwise are likely to continue to flow into the organization in the long term.²¹²

Attack Profile

AQAP targets security forces, foreigners, and Western interests in Yemen. To improve communal relations, al-Wuhayshi and AQAP sought to minimize civilian casualties, specifically of Muslims.²¹³ AQAP's attacks under al-Wuhayshi were moderately coordinated and required moderate levels of expertise. Meanwhile, under al-Raymi attacks appear to have slight less coordination but use greater levels of expertise. Under both leaders, AQAP attacks had two or more perpetrators on average and was rarely tied to another attack. AQAP's attacks were well-executed on average, but did little further the organization's mission. Attacks and weapons used were minimally to moderately unique on average, while targets had minimal security measure on average. Finally, AQAP attacked important societal processes that were symbolic to the organization but have only a minimal effect on the functioning of their target.

Research Objective Two: Identification of Strategically Relevant, Cyber Capabilities and Sophistication

Our research team was continually surprised by the advance of deviant content on social media and the open internet.²¹⁴ This is particularly true in the case of Da'esh, and their capacity for posting and hosting ever-more disturbing, violent propaganda is matched only by the willingness of (vulnerable) individuals to consume it.

The promulgation of open and free internet architectures requires less technical infrastructure for smaller or resource-poor organizations to communicate and conduct operations. Asymmetric organizations such as VEOs and criminal groups likewise expanded their reach and capacity for operations. VEOs have narrowed the infrastructure gap with larger, more affluent adversaries who have the means to develop expensive infrastructure for internal communication (e.g., the U.S. Government invests in internal communication portals for secure communication). VEOs leverage existing digital

²¹⁰ CFR.Org staff (2015).

²¹¹ Ibid, 4

²¹² CFR.Org staff (2015).

²¹³ Johnsen (2012).

²¹⁴ Ingram, H. 2016. A Brief History of Propaganda During Conflict: A Lesson for Counter-Terrorism Strategic Communications. *International Centre for Counter-Terrorism- The Hague*.

technologies to conduct operations, recruit members, solicit financing, and facilitate strategic objectives during conflict.²¹⁵ The lowering of technological barriers has changed organizations' behaviors on the short-end of the power asymmetry and enabled the historically disadvantaged VEOs to launch social media campaigns akin to those of large governments and corporations.²¹⁶

Given the web's inherent anonymity, limited regulation, rapid flow of information, and large audience, the internet has prompted a shift in criminal and deviant behavior. Problematic internet use by individuals interested in these groups increased dramatically.²¹⁷ This is due in part to the availability of clandestine digital forums that allow participants to express deviant opinions with little fear of negative social consequences, such as being discredited or stigmatized.²¹⁸ As a result, to examine the cyber capabilities of the VEOs in our sample, we selected transient webpages as our unit of analysis. In the following sections, we describe our rationale for selecting this type of channel, our overall method, and a unique profile of Da'esh. Finally, we conclude this section with details about how each group in our sample uses features differently.

Transient Webpages: A Unique Look into Capabilities

Da'esh is the most prolific violent extremist group on social media, but their cyber footprint is more complex than their use of mainstream services. Their cyber profile involves pushing content into open infrastructures to disseminate information, such as ideological messages, propaganda, and training instructions. To date, much of the research on Da'esh communication has focused on what is publicly available through speeches and videos released by al Hayat Media and Da'esh Twitter users.²¹⁹ A notable exception is the important monograph from Saltman and Winter (2014), where the authors identified complex cyber capabilities such as 1) centralized propaganda, 2) global dissemination of threats, 3) custom app development, and 4) decentralized messaging. Given the acknowledgement of Da'esh's prolific use of a variety of Internet Communication Technology (ICT), it follows that each aspect they use plays a role in sharing the story Da'esh wishes to convey.

An organization's online presence plays a significant role in communicating with a global audience.²²⁰ In regards to Da'esh and its messaging campaigns, popular platforms of more conventional ICT—like Twitter or Facebook—are mere starting points for its multi-faceted, complex cyber profile. Thus, the purpose of this effort is to better understand the nature of the cyber channels and domains most used in the messaging of Da'esh, particularly as it manifests through social media connected transient web pages to an English-speaking audience. The organization's end goal vis-à-vis their online marketing campaign is

²¹⁵Denning, D. E. (2010). Terror's web: how the Internet is transforming terrorism. *Handbook of Internet Crime*. 194–213.; Weimann, G. 2004. *www.terror.net: How modern terrorism uses the Internet*. Special Research Report, Washington DC: United States Institute of Peace.

²¹⁶ Balmer, J.M.T. (2001). Corporate identity, corporate branding and corporate marketing-Seeing through the fog. *European Journal of Marketing*, 35 (3/4), 248–291.; Bartlett, J. & Reynolds, L. (2015). State of the art 2015: a literature review of social media intelligence capabilities for counter-terrorism. *Demos*.; Fenstermacher, L. & Leventhal, T. (2011). Countering Violent Extremism Scientific Methods & Strategies. *Multi-Disciplinary White Paper in Support of Counter-Terrorism and Counter-WMD*.

²¹⁷ Weimann, (2004); Recupero, P.R. (2008). Forensic evaluation of problematic Internet use. *The Journal of the American Academy of Psychiatry and the Law*, 36(4), 505–14.

²¹⁸Steinfeldt, J. A., Foltz B. D., Kaladow J. K., Carlson T. N., Pagano, L. A., Benton E., & Steinfeldt M. C. (2010). Racism in the electronic age: Role of online forums in expressing racial attitudes about American Indians. *Cultural diversity & ethnic minority psychology*, 16(3), 362–371.

²¹⁹ Ingram (2014); Zelin (2015); Veilleux-Lepage, Y. (2014). Retweeting the Caliphate: The role of soft-sympathizers in the Islamic State's social media strategy. Presented at the 6th International Symposium on Terrorism and Transnational Crime. Antalya, Turkey.

²²⁰ Ligon, Harms, & Derrick (2015)

complex and is used to “attract potential recruits, raise money, promote the image of the organization, or just spread fear among its enemies.”²²¹ While there is some evidence that a centralized authority approves messaging prior to it being disseminated via more conventional channels (e.g., Dabiq, Al-Hayat Media), the cyber footprint of Da’esh is more complex. This overall strategic effort is reportedly overseen by a skilled media council.²²² However, the deployment and dissemination of Da’esh messages is arguably decentralized once content is generated, resulting in a robust cyber presence.

While the Da’esh strategic and tactical cyber profiles are unquestionably unprecedented,²²³ questions remain as to what we can glean about the organization from its messaging. The dataset used for assessing Da’esh’s online presence was unique to this project and comprised of 4.5 million tweets and 16,000 attached transient webpage articles posted by Da’esh followers, members, and sympathizers. The research methodology and subsequent data analysis provides insight into the messaging dynamics of Da’esh on English channels. We conclude the study with a discussion of limitations of our method, implications of our findings, and recommendations for future research.

Cyber Method: Da’esh Content Only

We collected this data by developing a custom program that follows the method outlined in Figure 14.²²⁴ First, our program utilized the Twitter API to follow and log tweets posted by the hacktivist group Anonymous. For the present effort, we did not evaluate the individual tweets, but used them as launching points to the open architectures where richer content is housed. During much of this collection, Anonymous posted Da’esh members’ Twitter handles, approximately one every two minutes since August 2014. As stated previously, the goal is to understand the strategic messaging from the deployment of messages by large grassroots followers. Thus, our program compressed a list of Da’esh-affiliated accounts identified in the posted content. From that list, our system utilized the Twitter API to download a sample of the latest tweets from each Da’esh-affiliated account.

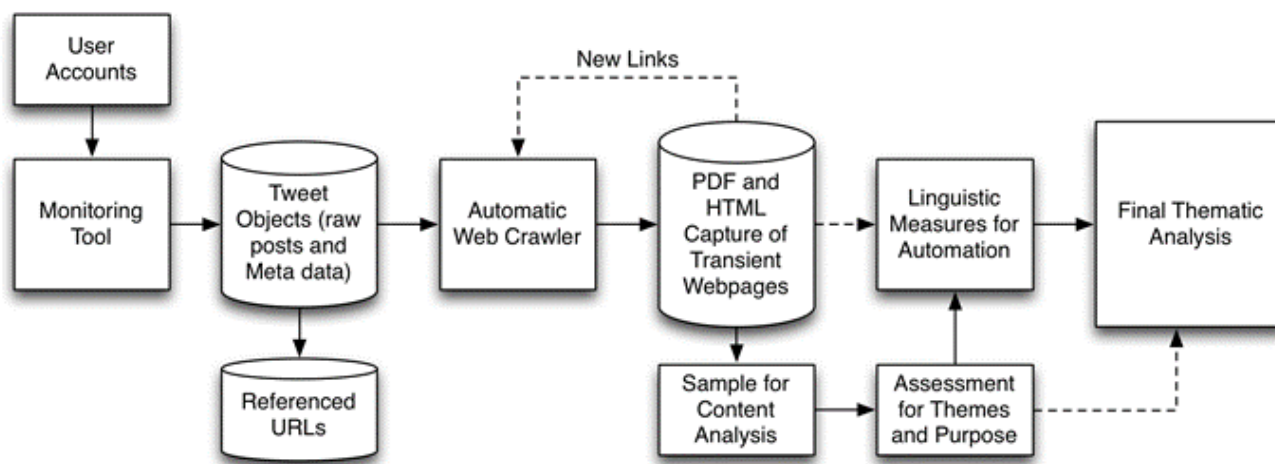


Figure 14. Method for capturing Da’esh transient webpages.

²²¹ Barrett (2014, p. 53)

²²² Charles Lister wrote extensively on how Da’esh marketed <https://www.brookings.edu/blog/markaz/2014/10/24/cutting-off-isis-cash-flow/>

²²³ Zelin (2015)

²²⁴ Derrick et al. (2016).

After logged into our database, the tweets were sorted into various components (e.g., web addresses and links, hashtags, mentions) to be analyzed. Our software searched for links within tweets referencing anonymous posting services for open content-publishing transient webpages (e.g., JustPaste.it, dump.to). Next, our software automatically crawled to the referenced webpage and captured both PDF and HTML versions of the actual transient webpages and stored them our database. From these pages, the program identified any links to other transient webpages/open architectures in the online posting. In a recursive manner, the software continued to download and analyze the content until all possible transient links had been found and captured. To date, this process has produced over 4,500,000 tweets, 1,589,623 URLs, and 16,000 transient web pages, and we have labeled this effort the *Social Media for Influence and Radicalization (SMIR) Dataset*.²²⁵

Cyber Method: Webpage Identification for All 10 Groups

To collect cyber data for the 10 groups, we used keyword searches as well as a custom webpage collection program. The collection team used keywords related to the group of interest to search Google and Twitter for links to transient cyber objects of each group. Keyword searches were performed in both English and Arabic. The initial corpus of keywords was developed by SMEs familiar with each of the 10 groups. Once a webpage was discovered, our webpage collection program downloaded and extracted all relevant information in PDF format. More importantly, the custom program also searched for more links to download and analyze. This process was performed for a four-month period from May through August 2016.

After the transient webpages were collected and stored, the cyber objects within each were provided to a subset of SMEs familiar with the organizations in the Jihadi Industry. The task of the SMEs was to review each document and identify the VEO associated with each webpage. The majority of webpages were written in Arabic, but included an emblem, symbol, or flag that was clearly associated with a particular



Figure 15. Example transient webpage from Al-Shabaab

²²⁵ SMIR was developed by Sam Church who is currently a graduate student and member of the Center for Collaboration Science at the University of Nebraska, Omaha

VEO. If an emblem, symbol, or flag was not easily recognizable or there was ambiguity in the group it was associated with, SMEs relied on available web materials to assist in the identification process. The most commonly used online resources included *The Long War Journal*,²²⁶ *Jihadology*,²²⁷ and *Jihadi Intel*.²²⁸ SMEs from the Islamic Studies program at the University of Nebraska also provided mediation and translation on objects that could not be readily classified.

Analysis and Results

Da'esh Channels

We rank ordered the top domains used by Da'esh between the dates of August 2015 to September 2016 in our SMIR dataset.²²⁹ Results indicated that Twitter, identified as the “jumping off point” for much of the persuasive content we find on non-indexed, transient webpages, is the most oft used. However, a variety of other types of domains are also used by Da'esh to disseminate messaging.

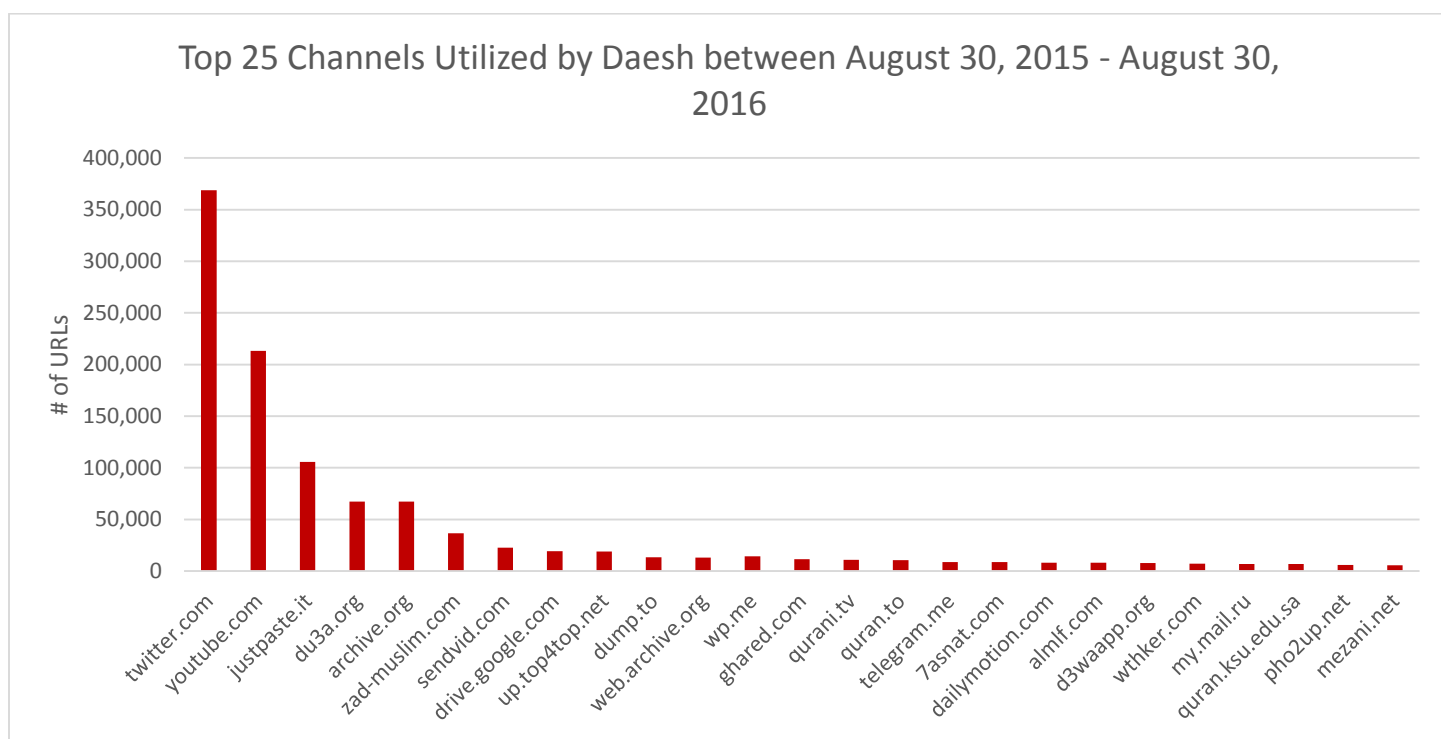


Figure 16. Da'esh Transient Webpages.

Cyber Profiles of Transient Webpages of Ten Groups

Approximately 767 non-indexed webpages were examined over a three-month period in 2016. Of those webpages, 77 were removed from subsequent analysis because they were either unidentifiable, not associated with a specific group (e.g., general Jihadi news), or associated with an organization not included in this report (e.g., Caucasus Emirate). Thus, a total of 690 webpages (n = 690) were included in the current analysis. As seen on Table 2, the overwhelming majority of transient webpages were associated with Da'esh (80.4%). Jabhat Fateh al-Sham (al-Nusra Front at the time) was associated with

²²⁶ Available at: <http://www.longwarjournal.org>

²²⁷ Available at: <http://jihadology.net>

²²⁸ Available at: <http://jihadintel.meforum.org>

²²⁹ A more detailed analysis of monthly usage could be conducted upon request.

59 webpages or approximately one-tenth of the overall sample (8.6%). Outside of Da'esh and Jabhat Fateh al-Sham, four groups were linked to 10 or more webpages per group including al-Qa'ida in the Arabian Peninsula (3%), the Afghan Taliban (2.6%), al-Qa'ida in Islamic Maghreb (2%), and Tehrik Taliban Pakistan (1.9%). Boko Haram (< 1%), al-Shabaab (< 1%), and Abu Sayaa Group (< 1%) were also associated with a small number of webpages in the dataset. No webpages were attributed to Lashkar e-Taiba directly.

Table 2. Descriptives for Transient Webpages (n = 690)

Domain	f	%
Da'esh	555	80.4%
Jabhat Fateh al-Sham	59	8.6%
AQAP	21	3.0%
Afghan Taliban	18	2.6%
AQIM	14	2.0%
TTP	13	1.9%
Al-Shabaab	6	0.9%
Boko Haram	2	0.3%
ASG	2	0.3%

The 10 groups implement their digital footprints differently, displayed by their open online presence, the types of embedded online technologies in use, and their communications mechanisms. This was assessed using 28 different variables about the presence and functionality of online tools. The following section illustrates significant differences between groups in their digital activities based on the results of a MANCOVA analysis and Games-Howell post-hoc test. MANCOVA, the One-Way Multivariate Analysis of Covariance, is a test suitable for assessing the influence of one or more independent variables on a single dependent variable, while controlling for effects by covariate factors. This is to say, MANCOVA investigates unexplained variances and explains some of it with the covariate(s). Thus more powerful than a MANOVA as it explains more variability in the model. Game-Howell was implemented as a post-hoc test as it is a nonparametric approach comparing combinations of groups. Only differences significant at the 0.05 level or higher between groups are reported.

Table 3 displays the results of the MANCOVA test of usage patterns across all groups. Ten variables of the 28 assessed variables have (highly) significant differences across the groups; this is generally driven by the newest of the 10 groups (i.e., Da'esh and Boko Haram) and their adoption of transient webpages as a means of communication and recruitment. Social networking refers to use of the website as a way for users to find and interact with each other. This can include Twitter, YouTube, and Facebook. "Viewable" references embedded materials on pages, where "Download" offers the ability of users to save the content locally or in the cloud. "Upload" signifies that users may add their own content. Specific to Org refers to websites which only serve single organizations, and Islam Specific is a count of webpages which explicitly disallow anti-Islamic materials.

Table 3. MANCOVA between-subjects across 10 groups.

Measures	Sum of Squares	F(df)	Partial Eta Squared	Noncent Parameter	Observed Power
Social Networking	229.839	2.338 (9)**	0.029	21.042	0.916
Video Viewable Count	306.816	4.323 (9)**	0.053	38.904	0.998
Video Download Count	246.411	3.13 (9)**	0.039	28.167	0.979
Text Upload Count	304.934	4.182 (9)**	0.051	37.637	0.997
Audio Viewable Count	301.241	4.175 (9)**	0.051	37.577	0.997
Audio Download Count	246.918	3.223 (9)**	0.04	29.005	0.982
Photo Upload Count	301.241	4.175 (9)**	0.051	37.577	0.997
Password Protected Content Count	271.144	3.594 (9)**	0.044	32.349	0.991
Specific to Org Count	2.305	2.174 (9)**	0.027	19.564	0.891
Islam Specific Count	10.858	1.903 (9)*	0.024	17.124	0.836

** : $p < .001$; * : $p < .05$

The Games-Howell test evaluates differences between groups compared to each other group, but does not assume equal variances between the groups, making it more suitable than a Tukey test or similar post-hoc analyses associated with the ANOVA test family. Unlike the MANCOVA test, it differentiates which groups are significantly different in their activities as compared to the others. Individual comparisons can be (highly) significant when the overall group comparison is not. Table 4 shows an example: there is a significant difference at the 0.005 level between Da'esh (high page counts) and Al-Shabaab (low page counts). However, the overall difference between the 10 groups as determined by the MANCOVA test is not significant ($p = 0.326$). This indicates that while most of the 10 groups have similar page view counts on their active pages, for every one page view of Al-Shabaab pages, Da'esh has 1031 page views on average.

Table 4. Page Views: Games-Howell test.

Measures	Comparison Groups	Mean Difference	SE	95% Confidence Interval	
				Lower Bound	Upper Bound
Page Views	Da'esh - Al Shabaab	1031.68**	198.53	283.19	1780.16

** : $p < .001$

Similarly, Table 5 shows that Da'esh has 10 (AQAP), 12 (AQIM, Jabhat Fateh al-Sham, and Abu Sayyaf Group), and 14 (TTP) more unique URLs per URL freely available online than their online competitors. The heightened presence of Da'esh compared to the other groups of interest makes it more likely that an unaffiliated user will find Da'esh-linked pages much more readily when searching for VEO content online.

Table 5. Unique URL Counts: Games-Howell test.

Measures	Comparison Groups	Mean Difference	SE	95% Confidence Interval	
				Lower Bound	Upper Bound
Unique URL Count	AQIM - Da'esh	-12.53**	2.55	-20.83	-4.23
	AQAP - Da'esh	-10.96**	2.57	-19.26	-2.66
	JFS - Da'esh	-12.50**	2.35	-19.97	-5.03
	TTP - Da'esh	-14.08**	2.35	-21.64	-6.52
	ASG - Da'esh	-12.89**	2.07	-19.5	-6.27

** $p < .001$

Considering online social networking sites, AQAP has slightly less outreach than Jabhat Fateh al-Sham, which has slightly higher outreach than AQIM. Boko Haram tends towards using public online social media sites slightly more than other groups as opposed to other open web sources like transient websites; this is reflected below in Table 6. While a differentiator in approach, Boko Haram's reliance on existing platforms could be an indication of their lack of sophistication overall – the group lacks the skills to engage with more hidden but more DIY types of websites, thus relies on existing online social networks.

Table 6. Social Networking: Games-Howell test.

Measures	Comparison Groups	Mean Difference	SE	95% Confidence Interval	
				Lower Bound	Upper Bound
Social Networking	AQAP - JFS	-.96**	0.27	-1.88	-0.04
	JFS - AQIM	.60	0.65	-1.82	3.03
	Boko Haram - Da'esh	.93**	0.10	0.60	1.26
	Boko Haram - AQIM	1.14**	0.21	0.37	1.92
	Boko Haram - Afg. Taliban	1.22**	0.29	0.19	2.26

** $p < .01$

Concerning use of video on pages, the Afghan Taliban utilizes significantly less than their counterparts in terms of video uploads, downloads, and viewable videos overall (Table 7). The Jabhat Fateh al-Sham utilizes the formats extensively in comparison to the rest of the groups, higher on average by a factor of 1.12 than the other groups. This is particularly true of viewable videos.

Table 7. Video Upload and Viewable Counts: Games-Howell test.

Measures	Comparison Groups	Mean Difference	SE	95% Confidence Interval	
				Lower Bound	Upper Bound
Video Upload Count	Afg. Taliban - Da'esh	-.81**	0.18	-1.37	-0.25
	Al-Shabaab - Da'esh	-.86**	0.17	-1.39	-0.34
	AQAP - JFS	-.96*	0.27	-1.88	-0.04
	JFS - AQIM	0.60	0.65	-1.82	3.03
	JFS - Afg. Taliban	1.33**	0.15	0.84	1.83
	JFS - Al Shabaab	1.39**	0.14	0.93	1.85
Video Viewable Count	AQIM - Boko Haram	-1.21**	0.21	-2.02	-0.41
	Afg. Taliban - Da'esh	-.57**	0.08	-0.84	-0.30
	JFS - AQIM	0.98	0.30	-0.04	1.99
	JFS - Da'esh	1.14**	0.23	0.40	1.88
	Boko Haram - Da'esh	1.38**	0.06	1.18	1.58
	JFS - Afg. Taliban	1.71**	0.22	0.97	2.44
	Boko Haram - Afg. Taliban	1.94**	0.06	1.74	2.15
Video Download Count	Afg. Taliban - Da'esh	-.64**	0.09	-0.94	-0.33
	JFS - Da'esh	.88**	0.23	0.14	1.62
	JFS - Afg. Taliban	1.52**	0.22	0.80	2.24

** $p < .001$; * $p < .05$

Following on Boko Haram's reliance on existing open social networks, this groups dominates text-based exchanges (Table 8). Notably, Boko Haram has a slight but significant higher prevalence of opportunities to upload and view text than Da'esh.

Table 8. Text Upload and Viewable Counts: Games-Howell Test.

Measures	Comparison Groups	Mean Difference	SE	95% Confidence Interval	
				Lower Bound	Upper Bound
Text Upload Count	AQIM - Boko Haram	-1.21**	0.21	-2.02	-0.41
	Afg. Taliban - Da'esh	-.54**	0.09	-0.82	-0.26
	JFS - Da'esh	1.15**	0.23	0.41	1.89
	Boko Haram - Da'esh	1.40**	0.07	1.19	1.61
	JFS - Afg. Taliban	1.69**	0.22	0.96	2.42
	Boko Haram - Afg. Taliban	1.94**	0.06	1.74	2.15
Text Viewable Count	AQIM - Boko Haram	-1.21**	0.21	-2.02	-0.41
	Boko Haram - Da'esh	.86**	0.16	0.36	1.37
	Boko Haram - Afg. Taliban	1.33**	0.29	0.28	2.39

** $p < .001$

The strategies behind audio media are more complicated. Whereas Da'esh allows users to upload audio clips their pages much more frequently than the Jabhat Fateh al-Sham, JFS posts embedded or downloadable content for their users much more frequently (Table 9). The apparent reliance of the JFS on audio messages to and towards their audiences suggests that this is their format of choice in issuing communiques.

Table 9. Audio: Games-Howell Test.

Measures	Comparison Groups	Mean Difference	SE	95% Confidence Interval	
				Lower Bound	Upper Bound
Audio Upload Count	JFS – Da'esh	-1.06*	0.31	-2.07	-0.05
	TTP – Da'esh	-1.20**	0.31	-2.24	-0.15
Audio Viewable Count	AQIM - Boko Haram	-1.21**	0.21	-2.02	-0.41
	Afg. Taliban – Da'esh	-.56**	0.09	-0.83	-0.28
	JFS – Da'esh	1.13**	0.23	0.39	1.87
	Boko Haram - AQC	1.27**	0.19	0.61	1.94
	Boko Haram – Da'esh	1.39**	0.06	1.18	1.59
	JFS - Afg. Taliban	1.69**	0.22	0.96	2.42
	Boko Haram - Afg. Taliban	1.94**	0.06	1.74	2.15
Audio Download Count	Afg. Taliban – Da'esh	-.59**	0.09	-0.88	-0.29
	JFS – Da'esh	.92**	0.23	0.18	1.65
	JFS - Afg. Taliban	1.50**	0.22	0.78	2.23

** $p < .001$; * $p < .05$

Considering (still) images on the open web, it is notable that Da'esh is not massively represented (Table 10). Popular news and public opinion imagines Da'esh in terms of their horrific images – this is however not totally supported by the data concerning recruitment and communication with users on the open web.

Table 10. Images: Games-Howell Test

Measures	Comparison Groups	Mean Difference	SE	95% Confidence Interval	
				Lower Bound	Upper Bound
Photo Upload Count	Afg. Taliban – Da’esh	-.56**	0.09	-0.83	-0.28
	JFS – Da’esh	1.13**	0.23	0.39	1.87
	Boko Haram - AQIM	1.21**	0.21	0.41	2.02
	Boko Haram – Da’esh	1.39**	0.06	1.18	1.59
	JFS - Afg. Taliban	1.69**	0.22	0.96	2.42
	Boko Haram - Afg. Taliban	1.94**	0.06	1.74	2.15
Photo Viewable Count	AQIM - Boko Haram	-1.21**	0.21	-2.02	-0.41
	Boko Haram – Da’esh	.86**	0.16	0.36	1.37
	Boko Haram - Afg. Taliban	1.33**	0.29	0.28	2.39
Photo Download Count	AQIM - JFS	-1.10**	0.31	-2.15	-0.05

** $p < .001$

Another attribute of interest in determining the unique cyber capabilities is the groups’ use of open, private, and anonymous exchanges. This data reveals a complicated pattern, where Da’esh uses more anonymous share technologies than other groups, but Jabhat Fateh al-Sham is the most differentiated in their profile, and al-Shabaab utilizes the technology least. Figure 17 and Table 11 display and interpret these results. While Da’esh is the most likely group to require an account to access content, the Jabhat Fateh al-Sham has more cases of password protected content. Figure 17 displays the significant differences between 7 of the 10 groups; 3 have statistically insignificant usage and are thus not displayed.

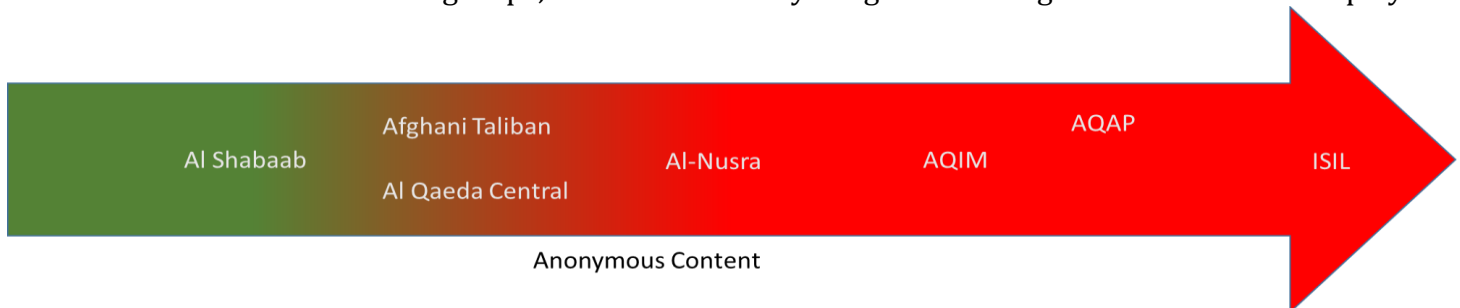


Figure 17. Use of Anonymous Sharing Techniques (red = uses the most; green = uses the least).

Table 11. Anonymous Sharing Techniques: Games-Howell Test

Measures	Comparison Groups	Mean Difference	SE	95% Confidence Interval	
				Lower Bound	Upper Bound
Anonymous Share Count	AQIM - JFS	-1.21**	0.17	-1.78	-0.65
	Al Shabaab – Da’esh	-1.01**	0.19	-1.61	-0.41
	AQAP - JFS	-.98**	0.27	-1.90	-0.05
	Afg. Taliban – Da’esh	-.96**	0.20	-1.58	-0.33
	AQIM –Da’esh	-.87**	0.21	-1.55	-0.19
	AQAP - AQIM	0.24	0.25	-0.63	1.11
	JFS - AQIM	1.21**	0.17	0.65	1.78
	JFS - Afg. Taliban	1.30**	0.15	0.80	1.80
Account Required Count	JFS - Al Shabaab	1.36**	0.14	0.89	1.82
	Boko Haram – Da’esh	-.83**	0.15	-1.31	-0.34
Password Protected Content Count	Afg. Taliban – Da’esh	-.61**	0.09	-0.90	-0.32
	JFS – Da’esh	.91**	0.23	0.18	1.65
	JFS - Afg. Taliban	1.52**	0.22	0.80	2.24

** $p < .001$

To establish a more efficient approach to gathering and analysis of content, automating the process proves vital in the detection of VEO content. Thus, a central research objective of 2017 for LEADIR is to test and validate a variety of automated coding techniques for website classification and sentiment analysis.

Research Objective Three: Determination of the competitive advantages unique to VEOs in the “Jihadi Industry”

In order to evaluate the long-term sustainability and performance of the VEOs in our 2016 sample, a VRIO analysis of the resources and capabilities controlled by the 10 groups was conducted (a VRIO analysis is an acronym for a four-question framework used to determine the competitive potential of a resource or capability in terms of whether it is valuable, rare, easy/difficult to imitate, and susceptible to exploitation by the organization).²³⁰

VRIO analysis evaluates the likelihood that an organization will obtain a sustainable advantage in a given competitive arena.²³¹ Competitive advantage references an organization’s ability to create more value than its rivals. A key determinant of competitive advantage is the resources and capabilities controlled by

²³⁰ Our November 2014 START Report identified this strategy as a way to compare strategic differentiators among VEOs.

²³¹ Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17, 99-120.

http://business.illinois.edu/josephm/BA545_Fall%202011/S10/Barney%20%281991%29.pdf

the organization. Subsequently, the first step in conducting a VRIO analysis of the Jihad Industry organizations in the 2016 sample was to identify strategically relevant resources and capabilities controlled by the organizations.

The second step in a VRIO analysis identified and evaluated each strategically relevant resource or capability on four dimensions: value, rarity, imperfect imitability, and organization. Organizations possessing only *valuable* resources and capabilities are expected to perform the same as all other organizations in the industry (i.e., competitive parity). Organizations possessing valuable and rare resources and capabilities are expected to perform *better* than other organizations but only for a short period of time (i.e., temporary competitive advantage), while organizations possessing *valuable, rare, and imperfectly imitable* resources and capabilities are expected to demonstrate a long-term advantage (i.e., sustained competitive advantage). Imperfect imitability of a resource or capability was determined by the presence of one or more of the following attributes:

VRIO Strategic Differentiators of Ten Groups					
Marketing and Branding	Human Capital and Recruitment	Fundraising	Tactical Innovation	Cyber Sophistication	Cyber Interactivity
Da'esh	Da'esh	Da'esh	Da'esh	Da'esh	Da'esh
AQAP	AQAP	AQAP	AQAP	AQAP	AQAP
AQIM	AQIM	AQIM	AQIM	AQIM	AQIM
ASG	ASG	ASG	ASG	ASG	ASG
Al-Shabaab	Al-Shabaab	Al-Shabaab	Al-Shabaab	Al-Shabaab	Al-Shabaab
Taliban	Taliban	Taliban	Taliban	Taliban	Taliban
LeT	LeT	LeT	LeT	LeT	LeT
Jabhat	Jabhat	Jabhat	Jabhat	Jabhat	Jabhat
TTP	TTP	TTP	TTP	TTP	TTP
Boko Haram	Boko Haram	Boko Haram	Boko Haram	Boko Haram	Boko Haram

Table 12. VRIO of 10 VEOs. (red = differentiating resource; green = lowest differentiating resource).

- (1) History – the focal resource or capability was acquired at a *particular* place and time in the past. Competing organizations are unable to imitate that resource or capability because they are operating in a different place and time (e.g., senior military leadership of ISIL who came from Saddam Hussein's regime).
- (2) Causal ambiguity – Competing organizations are unable to imitate the focal resource or capability because of its complexity, tacit, and/or intangible attributes (e.g., social media and cyber sophistication).
- (3) Social complexity – Competing organizations are unable to replicate the focal resource or capability due to its presence within a sectarian conflict that has its own magnetism (e.g., public discontent with the Assad regime).

The overall organization (i.e., its structure) must also be aligned in such a way as to take advantage of the resources or capabilities in question. If misaligned, competitive disadvantages may emerge even though resources and capabilities are valuable, rare and difficult to imitate.

VRIO analyses²³² evaluate the likelihood that an organization will obtain a sustainable advantage in a given competitive arena. Sustainable competitive advantages are argued to originate from the resources and capabilities controlled by the organization.

Strategically Differentiating Resources

Resources represent the tangible and intangible assets controlled by the organization. Resources can be financial (e.g., cash), physical (e.g., equipment, natural resources), human (e.g., knowledge, intelligence, training, creativity) and organizational (e.g., reporting structure, culture, planning and control mechanisms). For the present effort—building upon the findings from our 2014 report on the VRIO of Da’esh compared to its competitors—we assessed each of the 10 VEOs in our Jihad Industry sample on six resources: (1) Marketing and Branding, (2) Recruiting and Human Capital, (3) Fundraising, (4) Tactical Innovation, (5) Cyber Sophistication, and (6) Cyber Interactivity. Table 12 provides a snapshot of each organizational resources arrayed across VEOs in present sample, and the subsequent sections provide more justification and detail into each VEO’s differentiators.

Marketing and Branding Resources

An organization’s brand can be described as its personality.²³³ Like individuals and other firms, each VEO has a unique personality that is shaped by the VEO itself and the consumers of its products. A branding and marketing strategy can be understood as complementary components to an organization’s outreach. The brand is the representation and staple of the organization, while marketing is comprised of the behaviors the organization undertakes to sell its brand. In other words, marketing behavior is how an organization sells its brand or its personality. VEOs, like other organizations, put forth effort to establish themselves as a unique brand within the terrorism field and therefore engage in similar strategies like traditional firms, such as the production of media favoring the brand.

For this analysis, we used two measures of reputation and prominence to gauge the effectiveness of the marketing and branding of the 10 VEOs. According to Deephouse & Carter,²³⁴ an organization’s brand is largely built in the relative reputation or status that organization has. This status can be understood as how popular or well-known a certain organization is within its industry. In our analysis, this industry would be the “Jihad Industry.” Therefore, we used cultural and comparative reputation to measure the degree to which each VEO compares in status against other organizations within the industry. Prominence is a multiplicative index measuring both the level of co-branding and external legitimacy of an organization. The degree to which an organization allies or “co-brands” with another brand increases the performance and prominence of the organization and influences the relative understanding of the brand.²³⁵ For example, co-branding allows for two organizations to make use of the brand of the allied organization to further increase the prominence of its own brand and add to the relative performance of the other brand. This co-branding often leads to an increase in customers and resources because both

²³² As cited in the Executive Summary, a VRIO analysis is an acronym for a four-question framework used to determine the competitive potential of a resource or capability within a larger industry. Specifically, this framework assesses whether a resource or capability is Valuable, Rare, easy/difficult to Imitate, and susceptible to exploitation by Organization.

²³³ The analytic strategy and variable specification used for this section were adapted from Ligon, G.S., Harms, M., & Derrick, D.C. (2015). Lethal Brands. *Journal of Strategic Security*.

²³⁴ Deephouse, D. L., & Carter, S. M. (2005). An examination of differences between organizational legitimacy and organizational reputation. *Journal of Management Studies*, 42(2), 329-360.

²³⁵ Simonin, B. L., & Ruth, J. A. (1998). Is a company known by the company it keeps? Assessing the spillover effects of brand alliances on consumer brand attitudes. *Journal of Marketing Research*, 35, 30-42.

brands can make use of the resources of the other brands.²³⁶ Meanwhile legitimacy is a measure of the degree to which an organization follows the rules of industry and is an indication of how the group is regarded as a “professional” within its field.²³⁷ External legitimacy measures the degree to which each VEO is designated as a terrorist group of concern in the United States, Russia, Canada, Australia, and the United Kingdom. This measurement gauges the degree to which “strong” nation-states repute each extremist organization as a legitimate threat to its peoples or international interests.

Table 13. VRIO analysis ratings of marketing and branding for 10 groups.

VRIO analysis ratings of marketing and branding for 10 groups.			
Cultural Reputation	Cooperative Reputation	Prominence	Brand Effectiveness
Afghan Taliban	Afghan Taliban	Afghan Taliban	Afghan Taliban
JFAS	JFAS	JFAS	JFAS
Al-Shabaab	Al-Shabaab	Al-Shabaab	Al-Shabaab
AQAP	AQAP	AQAP	AQAP
AQIM	AQIM	AQIM	AQIM
Abu Sayyaf	Abu Sayyaf	Abu Sayyaf	Abu Sayyaf
Boko Haram	Boko Haram	Boko Haram	Boko Haram
Da'esh	Da'esh	Da'esh	Da'esh
LeT	LeT	LeT	LeT
TTP	TTP	TTP	TTP

Because each of the VEOs examined in this effort is prominent, there is little variability in the degree of the effectiveness of the each VEO’s marketing and branding across all VEOs in LEADIR. Yet, there is some indication of differences among the organizations. Because the Afghan Taliban does not formally co-brand with other organizations, it has a weaker reputation than Da’esh or Jabhat Fateh al-Sham;

²³⁶ Simonin & Ruth (1998)

²³⁷ Deephouse & Carter (2005).

especially in comparison to its status in the early 2000s, Afghan Taliban's branding and marketing effectiveness is considered low. Meanwhile, Lashkar-e-Taiba is the most prominent organization in Pakistan, and even makes use of non-violent front organization to continue its operations and outreach to its "customers." Furthermore, LeT aligns with multiple organizations and is designated as a terrorist group by the United States, United Kingdom, Canada, Australia, and Russia. For these reasons and others, LeT is rated high for all three measures and is regarded as highly effective in its branding strategy. Finally, al-Qa'ida in the Islamic Maghreb is considered moderately effective because it is well known locally, but lacks credibility globally outside of being aligned with al-Qa'ida Central. Furthermore, it is not designated by all five countries and does little propaganda outreach to increase its prominence.

Human Capital/Recruitment

Like most organization faced with increasing competition and growing external pressures, VEOs have realized that they, too, must evolve to meet emerging challenges.²³⁸ The current iteration of VEOs, such as Da'esh, Al-Shabaab, and AQAP, have been particularly successful at perpetuating violence and spreading fear through innovative means such as the utilization of social media and web-based platforms. The 2016 sampled VEOs have also been adept at building their ranks through a combination of both time-tested and increasingly novel personnel attraction and selection mechanisms. The importance of knowledge about social, personal and economic factors for recruitment, as discussed above, is reinforced by research both on the nature of VEO propaganda. Zelin²³⁹

Table 14. VRIO analysis ratings of human capital and recruitment for 10 groups.

VRIO analysis ratings of human capital and recruitment for ten groups.		
Novel Tactics	Diverse Tactics	Recruiting Effectiveness
Afghan Taliban	Afghan Taliban	Afghan Taliban
JFAS	JFAS	JFAS
Al-Shabaab	Al-Shabaab	Al-Shabaab
AQAP	AQAP	AQAP
AQIM	AQIM	AQIM
Abu Sayyaf	Abu Sayyaf	Abu Sayyaf
Boko Haram	Boko Haram	Boko Haram
Da'esh	Da'esh	Da'esh
LeT	LeT	LeT
TTP	TTP	TTP

²³⁸ We (Hunter, Shortland, Crayne, & Ligon, 2017) have a forthcoming manuscript in the *Special Issue on Terrorism in the American Psychologist*. Much of the framework of this section was developed in tandem to that manuscript.

²³⁹ Zelin, A. Y. (2015). Picture or It Didn't Happen: A Snapshot of the Islamic State's Official Media Output. *Perspectives on Terrorism*, 9(4). Advance online publication retrieved from <http://www.terrorismanalysts.com/pt/index.php/pot/article/view/445/html>. ISSN 2334-3745.

analyzed Da'esh social media output and identified that alongside promoting their military-related activities, the group highlighted their social services as well as “the great life one can live under the Caliphate, especially by foreign fighters” (p. 91). Other VEO media seeks to show their familiarity with western media; for example, posting pictures of fighters with Nutella jars.²⁴⁰ Furthermore, Da'esh spends significant energy presenting the view that they are always active and always on the march. Given the many competing organizations seeking support from foreign fighters, it is arguable that such strategies seek to protect potential and tenuously held recruits from the influence of competitors. In a review of their English-based social media between 2014 and 2015, Derrick and colleagues²⁴¹ identified images and text represented two orthogonal factors: violence and ideological rationality.

Moreover, when communicating to potential recruits from the West, ISIL has images that showcase both their military prowess and highlight their organizational legitimacy as well as couch pragmatic advice about travel and operations in ideological imperatives. This mix of pragmatic advice, ideology, and organizational legitimacy creates a powerful brand to influence potential recruits. In LEADIR, we assess the techniques VEOs use to increase their human capital. Following from how recruitment is assessed in conventional organizations, we rate each VEO's tactics in terms of their novelty (degree of surprise or uniqueness in a given region and time), diversity (number of different types of techniques), and overall effectiveness (degree to which the recruiting strategies yield a viable pool of skilled members). Using this framework, Table 14 highlights how the 10 VEOs in the present sample compared to each other. Two interesting findings emerged. First, Da'esh and AQAP performed the highest in terms of their recruiting and human capital metrics. Following from organizational theory, this indicates they are the two groups most poised for innovative attacks and performance long-term. Second, LeT is effective at recruiting, but due to limited competition in the region and State support, they do not need to diversify their tactics. This indicates a strategic vulnerability for LeT; while they have a temporary competitive advantage, because they do not have a variety of tactics, they may not meet the VRIO criteria of a sustained competitive advantage.

Fundraising

While it is difficult to assess the true wealth of any clandestine organization, LEADIR does have data to speak to the novelty of fundraising mechanisms used by a given VEO. Our benchmark scales require rates to compare VEOs based on low novelty fundraising tactics (e.g., membership dues) versus highly novel fundraising tactics (e.g., looting artifacts from the ancient city of Palmyra and selling them). For the present effort, we compared each VEO in our sample longitudinally to assess changes in the creativity of tactics to secure resources. In addition, we also were interested in the destructiveness of the tactic used. Destructiveness included whether the fundraising tactics were violent in nature, causing physical and personal harm.

Figure 18 shows that the oldest organizations have the least originality in their fundraising activities. The relationship tends to be inverse with organization age, which is to say that the longer the organization has been together, the less innovative their approach. The relationship is however not linear, and organizations which have been together for approximately 15 years are more innovative than those who have been together for 10 years, but are less innovative than those who are comparably new (less than 10 years).

²⁴⁰ Gates, S., & Podder, S. (2015). Social Media, Recruitment, Allegiance and the Islamic State. *Perspectives on Terrorism*, 9(4). Advance online publication retrieved from <http://www.terrorismanalysts.com/pt/index.php/pot/article/view/446/html>. ISSN 2334-3745

²⁴¹ Derrick, D.C., Sporer, K., Church, S., & Ligon, G.S. (2016). Ideological rationality: A cyber profile of ISIL. *Dynamics of Asymmetric Conflict Journal*.

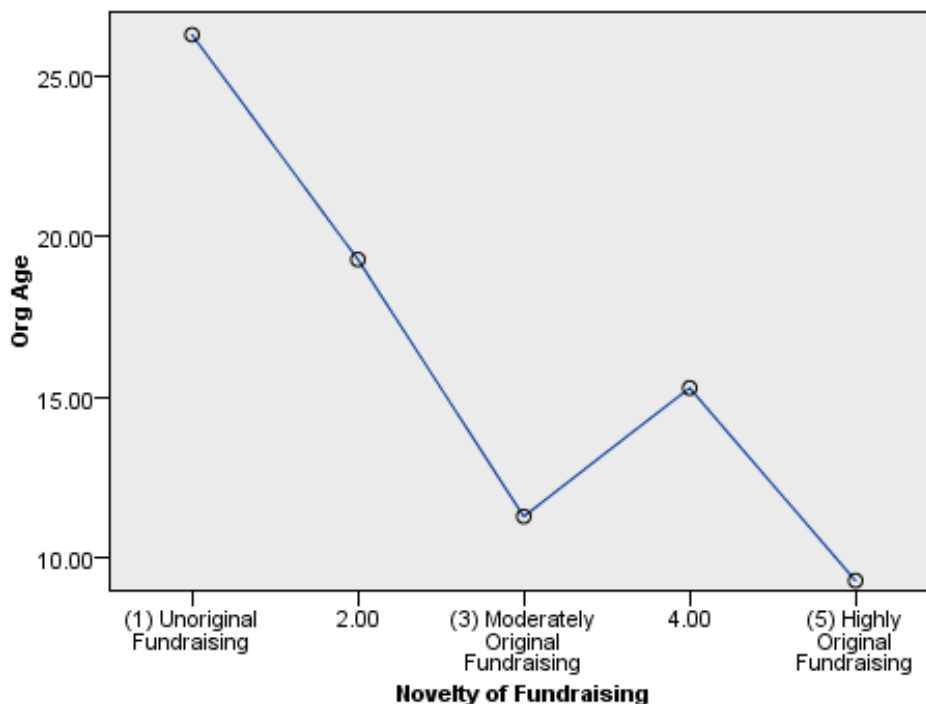


Figure 18. Comparative view of an organization's age and its relative novelty in fundraising.

Figure 19 displays destructive fundraising tactics per monetary unit and approximates a U-curve, indicating that the newest groups tend to have moderately destructive fundraising techniques. The oldest groups largely employed non-destructive fundraising tactics. Groups which have been together for roughly 15 years employed highly destructive fundraising tactics.

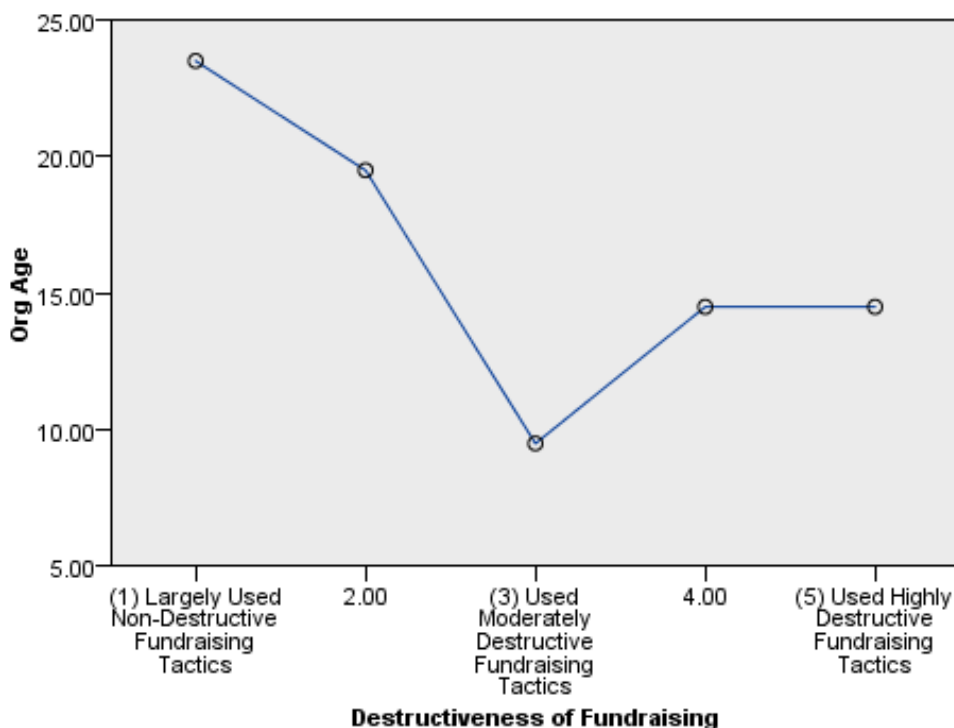


Figure 19. Comparative view of an organization's age and its destructiveness in fundraising tactics.

Table 15 summarizes and extends the previous analysis by comparing the 10 groups on by legality of fundraising methods (illegal methods/legal methods), the novelty of each group's tactics, and the overall effectiveness of each group's fundraising. It must be noted that there are differences in legality of fundraising and that splitting the groups on these aspects was necessary to display the maliciousness of the approach. While soliciting and receiving donations is legal under most Western governments fundraising via the illicit drug trade or human trafficking is an order of magnitude more criminal. It is not instructive to lump the two types of fundraising activities together in this case, though all funneling of monies is considered illegal.

Table 15. Overview table of 10 groups considering the legality of fundraising methods, novelty of tactics, and overall effectiveness.

Overview table of 10 groups considering the legality of fundraising methods, novelty of tactics, and overall effectiveness.			
Illegal Methods	Legal Methods	Novel Tactics	Fundraising Effectiveness
Afghan Taliban	Afghan Taliban	Afghan Taliban	Afghan Taliban
JFAS	JFAS	JFAS	JFAS
Al-Shabaab	Al-Shabaab	Al-Shabaab	Al-Shabaab
AQAP	AQAP	AQAP	AQAP
AQIM	AQIM	AQIM	AQIM
Abu Sayyaf	Abu Sayyaf	Abu Sayyaf	Abu Sayyaf
Boko Haram	Boko Haram	Boko Haram	Boko Haram
Da'esh	Da'esh	Da'esh	Da'esh
LeT	LeT	LeT	LeT
TTP	TTP	TTP	TTP

Tactical Innovation Resources

Organizations within the Jihadi Industry operate in a turbulent environment with immense competition over resources and human capital. In order to survive, VEOs must work toward creative goals and, more importantly, develop innovative ways to thrive in an unpredictable market. Tactical innovation, or the extent to which VEOs “adopt news methods or means of violence”²⁴² provides one indicator of creativity and innovation. To illustrate VEOs capacity for tactical innovation, we conducted an exploratory factor analysis (EFA) on the attack-level variables in our sample.²⁴³ A total of 1,441 attacks were coded yearly for each VEO in our sample, and 14 variables were explored using a principal axis factor analysis with varimax rotation. As seen on figure 20, eight items obtained loading scores of .50 or higher across two different constructs. The three items loading on the first factor pertained to markers of originality and expertise. This factor was named *Unique Proficiency*²⁴⁴ and describes attacks that require expertise and are unique in terms of the weapons used and methods employed. The five items loading on the second factor largely pertained to complexity and damage constructs. This factor was named *Attack Sophistication* and is characterized by highly coordinated, well-executed attacks that often cause major infrastructural damage. The two factors were moderately correlated ($r = .359$, $p < .01$).

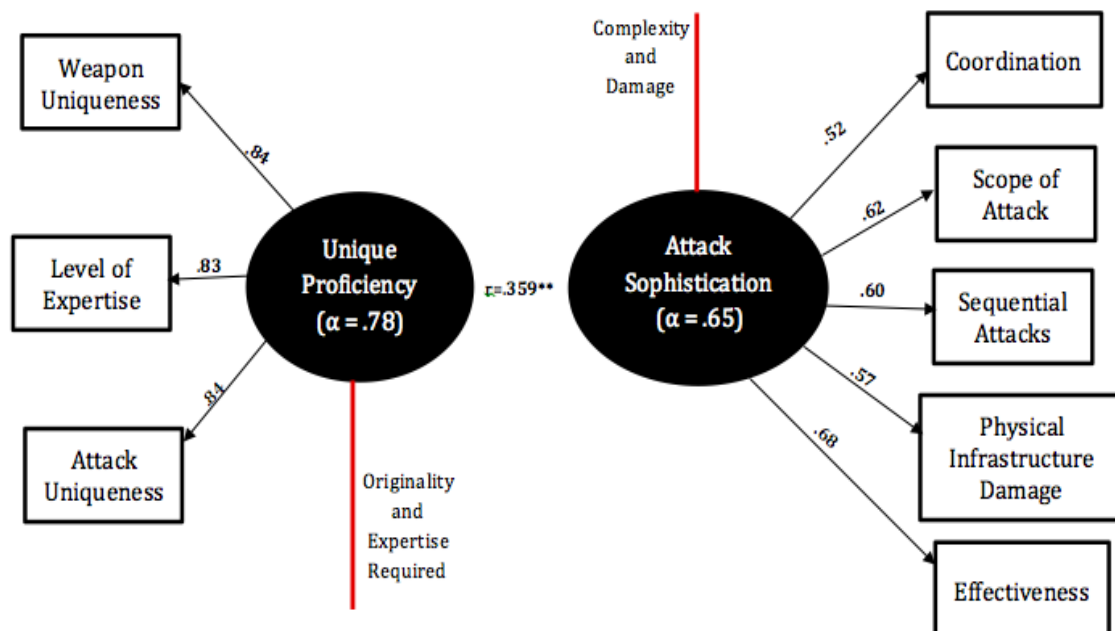


Figure 20. Factor loadings of attack features.

As seen below in Table 16, we performed a bivariate correlation analysis between the two tactical innovation types and a host of attack-related variables.²⁴⁵ In turn, this provides a form of validation and a way to specify the characteristics of each type of tactical innovation. First, *Unique Proficiency* was positively correlated with number of casualties and number of fatalities, and inversely related to the

²⁴² Gill, P., Horgan, J., Hunter, S. T., & D Cushenbery, L. (2013). Malevolent creativity in terrorist organizations. *The Journal of Creative Behavior*, 47(2), 125-151.

²⁴³ Since the attacks are bounded to the LEADIR database, these constructs act as indicators of each VEO's tactical innovation potential based on how their attacks were rated.

²⁴⁴ A nearly identical construct emerged from a PCA on the attack-level variables of a larger, more diverse sample of 50 VEOs (see Ligon, Harms, and Harris, 2014).

²⁴⁵ For simplicity, any values that were not significantly related to one or both constructs were removed from the table. In addition, non-significant coefficients were removed from the table. # of perpetrators, # of casualties, and # of fatalities are count variables. The remaining variables are dummy-coded.

number of perpetrators. In regards to target-type, *Unique Proficiency* was more likely to target military and government officials and less likely to target police and NGOs. Next, *Unique Proficiency* was highly likely to involve explosives or bombs and highly unlikely to involve firearms. *Unique Proficiency* was also positively correlated with chemical weapons. Finally, *Unique Proficiency* was positively correlated with bombings or explosions, barricade events, and unarmed attacks, and inversely related to armed assaults, assassinations, and kidnappings. Overall, the bivariate analysis suggests that *Unique Proficiency* aimed at achieving maximum damage (casualties and fatalities) while using the least amount of human resources (perpetrators). These attacks are likely to include explosives or bombs against human targets (as opposed to infrastructure) that represent the state (e.g., military). As such, these attacks are more likely to serve an instrumental rather than symbolic purpose. In some cases, *Unique Proficiency* used chemical weapons, which is a direct reflection of the overall uniqueness and expertise required to perform such acts of violence.

Table 16. Pearson product-moment correlation matrix.

	Unique Proficiency	Attack Sophistication
# of Perpetrators	-.159**	.132*
# of Casualties	.201**	.139**
# of Fatalities	.117**	.145**
Target Type	---	---
Police	-.124**	---
Military	.109**	---
Government (Diplomatic)	.087**	---
NGO	-.061*	-.090**
Telecommunication	---	.084**
Transportation	----	.077*
Weapons Type	---	---
Chemical	.094**	---
Firearms	-.634**	-.143**
Explosives/Bombs	.600**	.117**
Incendiary	---	.149**
Attack Type	---	---
Assassination	-.101**	---
Kidnapping	-.092**	-.065**
Barricade Incident	.057*	---
Bombing/Explosion	.508**	---
Armed Assault	-.464**	-.065*
Unarmed Assault	.083**	---
Facility/Infrastructure	---	.167**

* p<0.05: ** p<.01

Attack Sophistication was positively correlated with number of casualties, the number of fatalities, and the number of perpetrators. Concerning target-type, *Attack Sophistication* was positively correlated with telecommunication and transportation, and inversely related to NGOs. *Attack Sophistication* was more

likely to involve explosives or bombs or incendiary devices, but unlikely to involve firearms. Last, *Attack Sophistication* was positively correlated with facility or infrastructure attacks and negatively correlated with armed assaults and kidnappings. Overall, the bivariate analysis suggests that *Attack Sophistication* are likely to include explosives, bombs, or incendiary devices against infrastructure targets such as telecommunication or transportation-related targets. While *Attack Sophistication* has the potential to cause casualties or fatalities, human victims are typically not targets. Instead, human casualties are merely the byproduct of a larger attack on some form of infrastructure.

Each VEO's average *Unique Proficiency*²⁴⁶ and *Attack Sophistication*²⁴⁷ scores were used to guide the VRIO analysis and act as descriptive indicators of each organization's capacity for tactical innovation. Below, Figure 21 shows that there was consistency in each organization score across both measures. For example, Da'esh, Jabhat Fateh al-Sham, AQIM, and AQAP scored in upper half on both *Unique Proficiency* and *Attack Sophistication*, while the Afghan Taliban, LeT, TTP, and Abu Sayyaf Group scored in the bottom half. Two groups, Al-Shabaab and Boko Haram, were less consistent, scoring highly on one construct, but not the other. Al-Shabaab rated second only to Jabhat Fateh al-Sham in *Unique Proficiency*, yet scored in the bottom half on *Attack Sophistication*. Boko Haram had the third highest average *Attack Sophistication* rating, but scored poorly on *Unique Proficiency*.

Cyber Sophistication and Interactivity Resources

Because the examination of cyber profiles of VEOs is relatively new, we first provide an overview of how the VEOs in our sample use it execute organizational functions such as marketing, recruiting, fundraising, and attack planning. VEOs leverage domains with low barriers and low authentication in order to host the content in the open as long as possible. There are several different patterns considering page and content posting and attributes. Page attributes fall under one of three distinct aspects: those who view pages for the group membership or loyalty; up- and down- loading of content; or content engagement. This is confirmed by the results of an exploratory factor analysis of the web content we harvested (see Research Objective Two for detailed method) with varimax rotation (Table 17).

²⁴⁶ *Unique Proficiency* ranges from 3–13 with an average score of 6.21 and a standard deviation of 1.99.

²⁴⁷ *Attack Sophistication* ranges from 5–20 with an average score of 10.05 and a standard deviation of 2.92.

Table 17. Rotated Component Matrix* of page-based interactions.

Component Name		
	Sophistication	Social Interactivity
specific_to_org_count	0.603	
photo_download_count	0.723	
password_protect_content_count	0.723	
text_upload_count	0.726	
photo_upload_count	0.729	
forum_count	0.765	
audio_download_count	0.766	
audio_upload_count	0.782	
video_download_count	0.788	
url_count	0.805	
video_upload_count	0.811	
encrypted_messaging_count	0.814	
anonymous_share_count	0.825	
text_download_count	0.825	
group_messaging_count	0.850	
other_file_upload_count	0.902	
other_file_download_count	0.902	
text_only		
veo_id		
views		
video_viewable_count		0.695
text_viewable_count		0.841
audio_viewable_count		0.806
photo_viewable_count		0.737
direct_messaging_count		0.878
account_required_count		0.758
comments_count	0.850	
social_networking_count	0.925	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization; * Rotation converged in 5 iterations.

Figure 21 show that nine items obtained loading scores of .80 or higher across two different constructs. The four items loading on the first factor pertained to markers of complexity and the variety of features employed. This factor was named *Sophistication* and designates increasing technological skills and instantiations employed in message and content delivery by VEOs online. The five items loading on the second factor largely pertained to the facilitation of (social) ties between actors in the network. This factor was named *Social Interactivity* and is interactivity between actors in the social graph, including two types of direct message exchanges. The two factors were moderately correlated ($r = .46$, $p < .01$). An examination of the scores of each of our VEOs on these factors indicated that Da'esh and AQAP have a

sustainable competitive advantage in cyber. In addition, Boko Haram and al-Shabaab have emerging capabilities that warrant a closer examination over time.

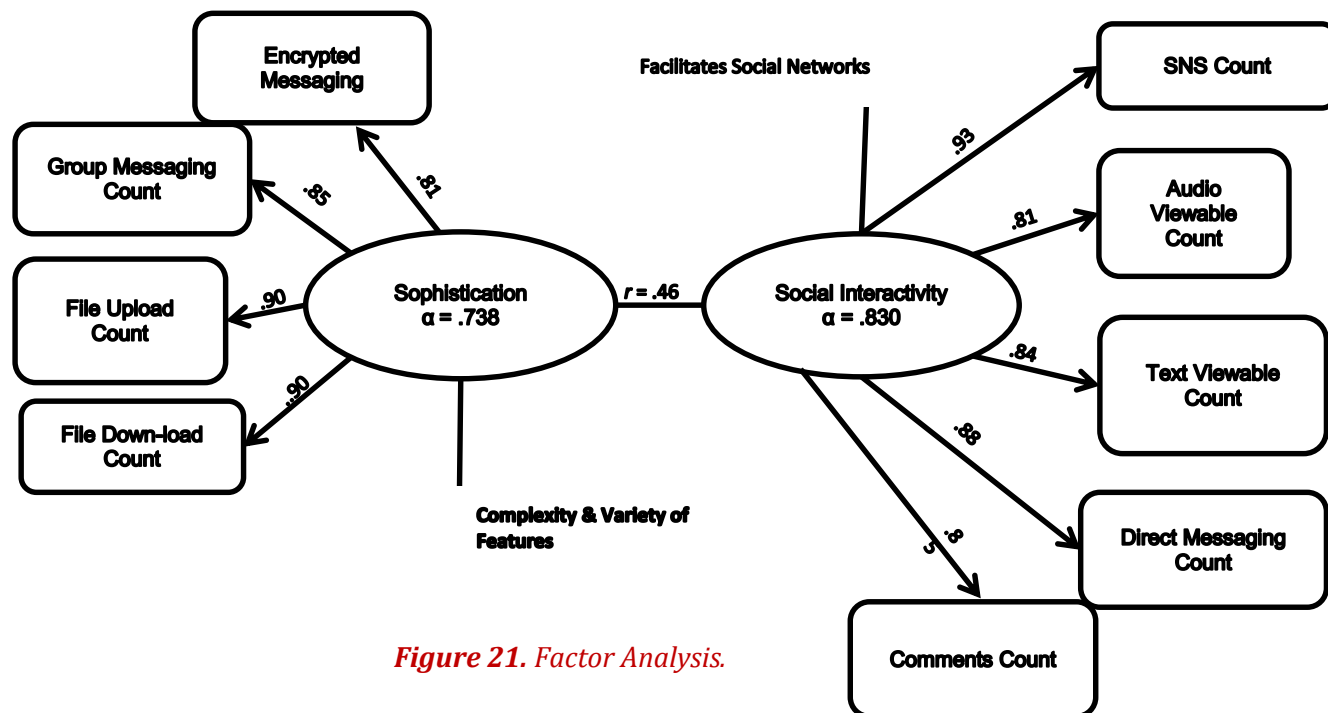


Figure 21. Factor Analysis.

To assess each VEO on these factors, we obtained scores on each factor across their cyber objects. Table 22 indicates that while Da'esh is the most sophisticated and holds the most capability for social interactivity, AQAP is a close second on all metrics. In addition, while Boko Haram scored high on social media interactivity, it appears that they leverage existing open architecture in predictable ways. Thus, they may not have the cyber capability to program or innovative similarly to Da'esh, AQAP, or al-Shabaab. Interestingly LeT and Taliban demonstrate the lowest cyber capabilities.

The main contribution from this analysis is that our process for assessing differences in the innovation and social media interactivity of these 10 VEOs allowed us to array the Jihad Industry VEOs in the present sample. This has implications for their capacity to recruit and share their messaging, raise funds, and command and control.

Table 18. Cyber Profiles.

Cyber Profiles of VEOs	
Cyber Sophistication	Social Interactivity
Da'esh	Da'esh
AQAP	AQAP
AQIM	AQIM
ASG	ASG
Al-Shabaab	Al-Shabaab
Taliban	Taliban
LeT	LeT
Jabhat	Jabhat
TTP	TTP
Boko Haram	Boko Haram

Conclusions

The report's main findings indicate that leadership, organizational structure, and innovation vary across the Jihadi Industry, which has implications for how government resources should be allocated for monitoring and analysis. In addition, the findings highlight the need for additional research to determine advanced indicator and warning signals of which groups will emerge as the most strategically differentiated and capable of malevolent innovation in coming years. While we reported important findings for each of our three research objectives, the following list comprises our most significant contributions.

First, Da'esh leads the Jihadi Industry in all performance metrics, but they have been significantly degraded since 2014. Across leadership, organizational structure, marketing, attacks, and cyber capabilities, Da'esh outperformed each VEO in the present sample of the Jihadi Industry. However, since our last assessment of their human capital in 2014, the quality of leader talent and innovation of attack sophistication have diminished.

Second, we developed a method to gather, quantify, and compare VEO cyber sophistication and social media interactivity, and this custom method statistically differentiated the 10 VEOs in our sample. Most of the research to date on VEOs' use of cyber has focused solely on descriptions of use of publicly-available social media platforms (e.g., Twitter, YouTube) or encrypted forums. Our contribution is that we systematically analyzed what cyber innovation means in the Jihadi Industry by assessing the underlying behaviors facilitated by their use of an array of platforms and web-based features.

Finally, top management team conflicts are related to lower organizational capabilities and less innovation. The clearest example of this in our dataset is that of the Afghan Taliban, who should be poised for high levels of performance given their strategic location, third party endorsement by al-Qaida Central leaders, and organizational age. Despite these resources, infighting among leaders and lack of clear leadership mission has resulted in a less capable organization. Conversely, organizations such as Jabhat Fateh al-Sham and Da'esh gain strength under the stewardship of a mix of pragmatic and ideological leaders working collaboratively toward organizational goals.

These findings logically lead to the recommendations flowing from the present effort. First, monitor AQAP's rebrand efforts in Yemen, as well as outreach to Foreign Terrorist Fighters abroad. AQAP has been the most capable AQ branch, and its marketing efforts indicate a pivot to focus on the social services it provides as well as the resilience of its organizational structure despite leader losses. Given the nexus of state-sponsored groups, failed and fragile states markers, and the crime laden territory of Yemen, this group is poised for a re-emergence by all indicators. In addition, the high degree of social interactivity on various AQAP cyber platforms raises warnings for their potential outreach to those capable of executing a large-scale, sophisticated attack outside their territory.

Finally, focus strategic communication efforts and operational planning to denigrate VEO leadership. Success from efforts to degrade the Da'esh organization should highlight at least one practice to continue and increase: leadership targeting. While leadership targeting has mixed results, VEOs in our sample with

the strongest cadre of leaders and a collaborative leadership team also have most sophisticated attacks, cyber presence, and fundraising portfolio. Rather than focusing on the capacity of any one individual in a leadership position, it's critical that policy makers focus strategic communications and planning on disrupting the organizational dynamics afforded by an adversary's diverse and collaborative leadership team.