



Tweeting the *Jihad*: Social Media Networks of Western Foreign Fighters in Syria and Iraq

Jytte Klausen

To cite this article: Jytte Klausen (2015) Tweeting the *Jihad*: Social Media Networks of Western Foreign Fighters in Syria and Iraq, *Studies in Conflict & Terrorism*, 38:1, 1-22, DOI: [10.1080/1057610X.2014.974948](https://doi.org/10.1080/1057610X.2014.974948)

To link to this article: <https://doi.org/10.1080/1057610X.2014.974948>



© 2015 Jytte Klausen. Published with license by Taylor & Francis Group, LLC © Jytte Klausen



Accepted author version posted online: 17 Oct 2014.
Published online: 09 Dec 2014.



Submit your article to this journal [↗](#)



Article views: 56771



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 127 View citing articles [↗](#)

Tweeting the *Jihad*: Social Media Networks of Western Foreign Fighters in Syria and Iraq

JYTTE KLAUSEN

Politics
Brandeis University
Waltham, MA, USA

Social media have played an essential role in the jihadists' operational strategy in Syria and Iraq, and beyond. Twitter in particular has been used to drive communications over other social media platforms. Twitter streams from the insurgency may give the illusion of authenticity, as a spontaneous activity of a generation accustomed to using their cell phones for self-publication, but to what extent is access and content controlled? Over a period of three months, from January through March 2014, information was collected from the Twitter accounts of 59 Western-origin fighters known to be in Syria. Using a snowball method, the 59 starter accounts were used to collect data about the most popular accounts in the network-at-large. Social network analysis on the data collated about Twitter users in the Western Syria-based fighters points to the controlling role played by feeder accounts belonging to terrorist organizations in the insurgency zone, and by Europe-based organizational accounts associated with the banned British organization, Al Muhajiroun, and in particular the London-based preacher, Anjem Choudary.

The *jihadi* insurgents in Syria and Iraq use all manner of social media apps and file-sharing platforms, most prominently Ask.fm, Facebook, Instagram, WhatsApp, PalTalk, kik, viper, JustPaste.it, and Tumblr. Encryption software like TOR is used in communications with journalists to obscure locational information. But circumstances conspire to make Twitter the most popular application. Specifically engineered for cellphones, it is easy and inexpensive to use. Posts (tweets) may contain images or text, links to other platforms can be embedded, and an incoming tweet can effortlessly be forwarded to everyone in an address list. Some types of social media require either 3G or wi-fi access but Twitter can be used in the absence of either.

Website managers in back offices integrate the twitter feeds of frontline fighters with YouTube uploads and disseminate them to wider audiences. These back-office managers

© Jytte Klausen

This is an Open Access article. Non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly attributed, cited, and is not altered, transformed, or built upon in any way, is permitted. The moral rights of the named author(s) have been asserted.

Received 5 September 2014; accepted 16 September 2014.

Address correspondence to Jytte Klausen, Department of Politics, Mailstop 058, Waltham, MA 02451-9110, USA. E-mail: Klausen@brandeis.edu

Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/uter.

are often wives and young female supporters. It makes little difference if they are working from Raqqa or from Nice. It may be that as phone and Internet access deteriorate on the ground, the insurgents are relying on disseminators outside the war zone to spread their messages.

Journalists, scholars, and militants communicate and follow each other on Twitter. Slow media—TV, newspapers, and radio—routinely quote Twitter as an authoritative source of information about the progress of the insurgency. Yet while Twitter may give the illusion of authenticity, as a spontaneous activity of a generation accustomed to using cell phones for self-publication, the online streaming of images and information is managed more tightly than is generally recognized. Evidence exists that the communications of the fighters are restricted and only trusted militants maintain high volume social media activities. A few militants compulsively update their Facebook profiles and Twitter feeds from the battlefield but many more do not communicate at all. New recruits turn over their cell phones upon arrival to training camps. Unauthorized contact with family members is punished, allegedly even with execution. Clearly, unmonitored communications by the foreign fighters may inadvertently disclose information that could be exploited by law enforcement and rival combatants. Our working hypothesis, therefore, was that what appears to be a spontaneous stream of self-publication using social media is, in fact, controlled communications.

The Staging and Communication of Terror—Past and Present

The literature on terrorist communication has focused on what Gabriel Weimann has called the “theater of terror.”¹ Terrorism aims to intimidate a particular audience—or sometimes multiple audiences. Victims are chosen not because they are the enemy but because of their symbolic importance. Alex Schmid quotes a Chinese proverb: “Kill one—frighten ten thousands.”² To achieve their objectives terrorists need to reach broad publics. However, as clandestine organizations, they have—in the past at least—had to rely on mainstream media to broadcast their message. This essential dilemma drives terrorist behavior. The solution is to stage dramatic violent incidents against symbolic targets compelling the media to broadcast the message. By attacking the Pentagon on 9/11, Al Qaeda strove to drive home the vulnerability of the American state to the *muhajideen*. The orange jumpsuits worn by two American journalists beheaded by Islamic State of Iraq and the Levant (ISIL) in August and September 2014 alluded to the jumpsuits worn by the inmates in Guantanamo Bay, making the executions appear as acts of retribution against the American treatment of Muslims.

The focus in the terrorism literature on the theater of terrorist spectacles overshadows the reality that terrorists also use the Internet for the same reasons everybody else does; for organization and planning, proselytizing and entertainment, and to educate the believers. In fact, most of the online communication of terrorists is mundane to the point of appearing innocuous.

A multi-year study of the content of *jihadist* Internet forums found that the forums were dominated by discussions of doctrine, the dissemination of information about “good” versus “bad” Koranic interpretation, and the distribution of Al Qaeda–approved tracts. Rarely do they discuss operational matters or provide playbooks for attacks.³ An analysis of a desk top computer and a thumb drive belonging to the cell responsible for the 2004 Madrid train bombing similarly revealed the material to be dominated by religious exegesis rather than operational information—the ratio of bomb manuals to doctrinal entreaties to *jihad* was about 1:3.⁴

Communication is therefore critical to terrorist strategy as well as organization. The Internet was a gift to terrorists on both scores. Al Qaeda early on understood the potential of the Internet for building a global movement. In a letter from 2002 to Taliban leader Mullah Muhammad Omar, Osama bin Laden wrote: "It is obvious that the media war in this century is one of the strongest methods; in fact, its ratio may reach 90 percent of the total preparation for the battles."⁵ During the first *jihadi* insurgency in Iraq, Ayman al-Zawahiri reiterated the lesson and wrote to the now deceased leader of Al Qaeda in Iraq Abu Musab al-Zarqawi: "We are in a battle, and more than half of this battle is taking place in the battlefield of the media. And that we are in a media battle in a race for the hearts and minds of our Ummah."⁶ Documents found at the Abbottabad compound in May 2011 revealed bin Laden's insistence upon the primacy and significance of online media. In a letter to an associate, he wrote: "media occupies the greater portion of the battle today."⁷

The need to reach the intended audience—governments, publics near and far—puts terrorists in an oddly dependent relationship to the media. After the 2001 expulsion from Afghanistan, Al Qaeda had to find a new way to connect with the masses. The chosen medium was tapes sent by messengers to Al-Jazeera. Two months after the 2005 London Underground attacks, Al-Jazeera broadcast an Internet posting from Ayman al-Zawahiri taking responsibility, together with Mohammad Sidiq Khan's suicide video. A year later, on the anniversary of the London attacks, Al-Jazeera released a second video featuring a second 7/7 bomber, Shehzad Tanweer. The novelty value of the Britons' delivery of the message guaranteed airtime for a while.

After 2006, Al-Jazeera became wary of acting as the publicity arm of Al Qaeda and could no longer be relied on to air Al Qaeda's videos. Fears of infiltration also pushed Al Qaeda-related groups and individuals onto closed Internet forums and chat rooms. The forums acted as online classrooms and kept the militants busy with translation work and administrative chores but proved constraining in key respects. The requirement that participants be "vetted" by administrators limited the ability of Al Qaeda to spread its message beyond the circle of those who were already motivated to seek out contact with *jihadi* extremists. Participants needed to know where to go as well as have connections to someone who can recommend them to gain access with a password. The forums were preoccupied with discussions of scripture and details of proper doctrine, which endlessly occupied the believers but limited the value of the forums as bullhorns for the cause. A third vulnerability is that the forums are subject to take-downs and cyberattacks.

Social media freed Al Qaeda from the dependency on mainstream media. Starting in 2011, many *jihadi* groups, media outlets, and individuals moved on to mainstream social media platforms and created new accounts on Twitter and Facebook. Most groups' media outlets still post their content to *jihadi* forums but will simultaneously create sponsored Twitter accounts where they release new statements or videos.

In the new lateral social media environment control over content is decentralized. Anyone can participate. Distribution is decentralized via "hubs" and volunteers use mainstream interactive and inter-connected social media platforms, blogs, and file sharing platforms. Cross-posting and re-tweeting content on social media by volunteers is a low-cost means of dissemination to wide audiences.

The new media environment is also resistant to policing. Control practices that worked in the framework of vertically controlled Internet environment do not work in the new environment of social networking and micro-blogging. The widespread use of lateral integration across multiple file sharing platforms builds redundancy through the manifold postings of the same document and resilience against disruption and suppression by governments and Internet service providers. The question arises how the Web 2.0 media environment has

altered not only the theatricality of violent incidents but also, more broadly, how media usages affects terrorist organization.

In 2001, the authors of a RAND Corporation report anticipated that the Internet would significantly alter how terrorists organize. Arquilla and Ronfeldt⁸ coined the term “netwar” to describe what they saw as an emerging mode of conflict in which the protagonists are small, dispersed groups who communicate, coordinate, and conduct their campaigns in an “Internetted” manner and without a precise central command. In retrospect the prediction may have been premature at the time but accurate in the social media environment. Twitter now connects terrorist groups operating in multiple theaters of warfare and connects them with tactical support groups outside the combat zone, eliminating geographical constraints.

To sum up, propaganda has always been central to terrorism. Terrorists prefer tight control of the message but lacking directly control of mass media—print or television—have in the past relied on compelling mainstream media into doing the communication by means of the staging of attacks. Social media has changed the dynamic fundamentally. It has eliminated the terrorists’ dependency on mainstream media, reversing the relationship by making mainstream media dependent on the *jihadist*-run social media. But has media self-sufficiency come at the cost of message control? And what changes have new media brought to the theater of terror?

The Use of Twitter in ISIL’s Spring 2014 Offensive

Once in the combat zone, the fighters assume aliases. Many take names incorporating *muhajir* (emigrant) or in reference to their national origin (e.g., al-Amriki). On video, men going by the names of “Abu Muhajir” (“the immigrant”) or Al-Britani (“the Briton”), read their wills in European languages, and declare their burning desire to die.

After the insurgents moved into Iraq, the content became increasingly gruesome. In April “Abu Daighum al-Britani,” a British fighter with ISIL, used Twitter to circulate a screenshot made using Instagram of himself holding a severed head. By August, Twitter had served up stills from videos of ongoing beheadings, severed heads on fence posts, rows of crucified men hung on crosses on a platform in a dusty town like an image from a bad movie, and even a picture of a seven-year-old Australian boy holding a severed head offered to him by his father. The execution of James W. Foley provoked the American public and brought the United States into the conflict. The pictures of violence starkly highlighted the role played by social media in contemporary terrorist tactics. But it is not all brutal horror on Twitter. Tweets of cats and images of camaraderie bridge the real-life gap between Strasbourg, Cardiff, or suburban Denver, and being in a war zone. They may even make it seem more desirable to be in war-torn Raqqa and Aleppo than comfortably, and boringly, in the family home: “It’s actually quite fun. It’s really really fun. It’s better than that game Call of Duty. It’s like that but it’s in 3D where everything is happening in front of you,” tweeted Abu Sumayyah Al-Britani, a British foreign fighter with ISIL.

Prior to the civil war, the Syrian telecommunications system was among the most poorly developed in the area. Only about one-fifth of the population was estimated to have access to the Internet but about 60 percent of the population had cell coverage. In November 2012, the Syrian government shut down Internet and cell phone communication cartels under its control. Repeated black-outs have occurred in 2014, generally shutting down close to all Internet traffic.⁹ Iraq ordered a shutdown of the Internet in June after ISIL’s takeover of several cities in the north and the declaration of the “Islamic State.” More specific orders were later added to shut down access to Facebook, YouTube, and Twitter, and other apps.¹⁰ Complaints over poor Internet access emerged on *jihadist* social media



Figure 1. Life-style Tweet from “Abu Fulan al-Muhajir” showing “Band of Brothers” spirit. Source: <https://twitter.com/Fulan2weet/status/374579796858404865>.

but generally the *jihadists* appear to have been able to overcome the practical impediments to Internet access.

The insurgents may be providing their own satellite-linked networks. Satellite modems are used to create hotspots and temporary pop-up wi-fi networks in areas where state networks are disabled. A number of private companies advertise bundled telephone and Internet VSAT (satellite) services from Syria.¹¹ The Islamic State moved fast to secure electricity and communication infrastructures in Raqqa and its other strongholds. Electricity is also a prerequisite for useable phones and pop-up satellite networks. A tweet from “Abu Fulan” from September 2013 shows how much the fighters rely on this basic utility (see Figure 1).

Methodology and Data Collection

Over a period of three months, from January through March 2014, we collected information from the Twitter accounts of 59 Westerner fighters known to be in Syria. Members of our research team used their own Twitter accounts to identify potential foreign fighters in Syria. Many of the leads came from news stories, blogs, and reports released by law enforcement agencies and think tanks. A total of 60 accounts were initially identified but one was inactive at the time, and therefore excluded from analysis. (Accounts that had no outgoing activity were excluded from the dataset on the assumption that they were “listening-in” accounts created to keep track of activity). The 59 accounts produced a total of 154,119 tweets (with

an average of 2,612). They had 892 followers and followed 184 accounts. On average, each account had posted 85 pictures and 91 videos.

The national origin of account holders was usually identified on the basis of the dominant languages (e.g., English or Dutch) used in the Twitter feeds. When available, other relevant information was drawn from the accounts. In some cases, additional information about the account holders was available from postings on other types of social media (e.g., Facebook or YouTube). It is often difficult to determine the national origin of account holders, and we could specify the specific country of origin for just 27 accounts (44 percent). Over half of these originated in France and the United Kingdom. We identified three American account-holders in the starter set but a number of other Americans appear to be influential in the broader network.

We sometimes found ourselves second-guessing already available classifications. Abu Fulan al-Muhajir, who tweets under the handle @fulan2weet, has been identified as a Dane, because he started tweeting from Denmark before going to Syria. He never tweets in Danish, however, and his use of colloquial English is so fluent that we do not think he is Danish. “Abu Fulan” did not respond to our question about his origin.

Using a snowball method we treated the original accounts as starter nodes in a network of followers and those being followed by others, and created a larger data set that covers the entire network. The larger dataset, consisting of about 29,000 Twitter accounts, comprised all the accounts following or being followed by the 59 starter accounts in the network. The purpose of collating the expanded data set was to analyze the at-large network that Western fighters in Syria follow and to which they direct their tweets. It was dominated by accounts that were clearly far more important than any of the original starter nodes. Notably, a number of home-country organizations and proselytizers play dominant roles in the network. The official accounts of designated terrorist organizations inside and outside the war zone were also represented. For example, we identified 12 accounts that belonged to known terrorist organizations and entities.

The average Western foreign fighter in our data set has tweeted 2,612 times. A number communicate many times every day, and some update their accounts every five to ten minutes. By and large, posts are used to communicate quickly, and text-only tweets comprised 93 percent of the total. However, struck by the feeds containing touristy snapshots of cats and hanging out with friends from back home interspersed with pictures of severed heads and grisly executions, we also collected a sample of picture files and subjected them to content analysis.

The results of our analysis of the 59 starter nodes in the network, along with the content of the most recent tweets in their feeds, are outlined first. The at-large network is described next. Using social network analysis (SNA) tools we were able to identify the most important disseminators of content that drive the traffic on Twitter. Unfortunately the scope of the at-large data set for the Twitter network exceeds the capacity of our analytical platforms, and so more sophisticated analytical description was not possible. Further, the particular network captured by our snowballing methodology comprises only a slice of the global network unfolding on Twitter. A researcher tunneling into the network through a different set of starter accounts (e.g., a collection of accounts belonging to sympathizers based in Qatar) might identify a different set of network leaders.

Twitter Usage by Western Foreign Fighters

Over 70 percent of the time, Western foreign fighters active on Twitter retweet content from other individuals rather than posting original content. They generally use their native

Table 1
Popularity ranking of accounts in Twitter network—Degree centrality

Twitter account name	# of followers	# of tweets	Degree score
aburahman50	7,508	811	8,749
ITSLJinny	5,566	5,670	5,682
Fulan2weet	3,716	2,272	3,805
I_Jaman_	3,006	9,792	3,231
khorasani_	2,232	1,381	2,322
Hamidur1988	1,833	2,037	1,989
ISILTWEET	1,697	2,168	1,893
Abu_Qaqa	1,680	286	1,845
Khalid_Maghrebi	1,620	7,775	1,850
Taimiyyah	1,559	16,600	1,914
AbuMamadou	1527	144	1,833
AbuYehya_AlShami	1,508	840	1,852
AbuHarith5	1,379	9	4,311
AlGhurabaa	1,339	8,825	2,408
un_serviteur	1,296	11,000	145
Al_Brittani_	1,287	1,102	113
abu_muhajir1	1,233	498	1,310
Salafi_Jihadi	1,116	968	179
nadjmu	884	7,799	887
MrJaman_	846	1,571	20

N = 59.

language when tweeting, even when the content is related to doctrine or religious instruction. A native Western language was used in 85 percent of all the feeds belonging to the 59 starter nodes. Arabic was used in 9.4 percent and 5.7 percent used a mix of Arabic and the fighters' native Western language.

On average, each account has many more followers than people they follow on Twitter: 892 followers versus 184 being followed. Some tweeters are celebrities, among them Abu Talha al-Almani, a rapper previously known as Deso Dogg who has become a foreign fighter and is based in Syria. Forty-four or 73 percent of the 59 accounts had more followers than accounts they were following. It would appear that approximately three out of every four Western-origin foreign fighters using Twitter have a significant impact as proselytizers for violent *jihad*. In comparison, say, with a mainstream celebrity like Justin Bieber, the *jihadists* are not very popular, but compared to the average Twitter user, who reportedly has 61 followers, they are minor celebrities. Three-quarters of all Twitter users follow more accounts than they are followed by. So in terms of influence, with on average, 892 followers and 184 following accounts, the *jihadists* are not doing badly. In sum, they are the producers rather than the consumers of impact.¹²

The top twenty most prolific Westerners have been identified by ranking the accounts by their number of followers and activity, as indicated by the number of tweets. The result is displayed in Table 1. together with the degree centrality scores, a social network analysis metric that indicates popularity in the network.

Table 2
Official Twitter accounts in the foreign fighters' Twitter network

Twitter name	Account name	Country of origin	# following	# followers
Anjem Choudary	anjemchoudary	UK	0	7,316
Jabhat Al-Nusra	AlNusra	SYRIA	723	2,984
Millatu Ibrahim	RadicalIslamist	UK	612	2,564
Doula News English	Doula_news2	ISIL/SYRIA	158	1,509
SalafiMediaUK	SALAFIMEDIAUK	UK	131	1,385
ISIL Media Hub	ISIL_Media_Hub	ISIL/SYRIA	9	889
De Ware Religie	DeWareReligie	HOLLAND	96	529

Establishing the identity of the account holders is often tricky. Some of the accounts belong to individuals but at least two were managed on behalf of organizations. In some cases, different accounts belonging to the same individual were created in their name after they had died. @I.Jaman belonged to Iftikhar Jaman, a.k.a. Abu Abdur Rahman Al-Britani, a 23-year old man from Portsmouth, England, who died fighting in Syria in December 2013 for ISIL—*before* we collected the data. He was a prominent figure in the British Al-Muhajiroun network and an associate of Anjem Choudary. The other accounts are described in Figure 2.

ISILTWEET, A1Ghurabaa, and Salafi_Jihadi are accounts that appear to be semi-official mouthpieces for different organizations, all under the ISIL umbrella. ISILTWEET is managed by Abu Dujana AlMuhajir, who also uses the alias @AbuDujanaBritani. Abu Dujana acts as “Dear Abby” for anxious Westerners who want to join the fight. He is a favorite of journalists and occasionally engages in online interviews. His pictures suggest he is based in Raqqa.

Abu Usama @A1Ghurabaa is in the British Al-Muhajiroun network. He sponsors several of Anjem Choudary’s pet projects, and the account also supports the American preacher, Ahmad Musa Jibril. It primarily gives instructions in the duties and objectives of the faithful. Nothing suggests that it is based outside the United Kingdom. Salafi_Media appears to be a press bureau for a division of foreigners fighting with ISIL. It supports some of the same particular English-speaking preachers in the Al-Muhajiroun mold—Ahmad Musa Jibril and Musa Cerantonio, an Australian preacher—and the same causes as the previous account but it appears to be based in Raqqa. Pictures and news about units comprised of foreigners and led by al-Shishani dominate the feed. By August 2014, A1Ghurabaa is still active but has adopted a policy of protected view, meaning that only approved viewers can access the feed. ISILTWEET is disabled. Salafi_Jihadi is still active, and AbuDujanaBritani maintains his parallel account on ask.fm. Detailed information about these accounts is provided in Table 2.

A number of organizations are deeply embedded in the network of Twitter streams attributable to the Western fighters in our data collection. Top was Anjem Choudary’s U.K.-based account. Two other accounts managed by Britons—and in both cases apparently also U.K.-based—are Millatu Ibrahim and SalafiMediaUK. The brand “Millatu Ibrahim” started out as a designation for the Germany-based faction led by Mohamed Mahmoud, an Austrian who formerly ran the Al Qaeda portal, the Global Islamic Media Front. Since the latest round of proscription of Choudary’s organization, the name has migrated to the

@abudurahman50, the top scorer, is a Dutch militant from Almere, who has posted exceedingly grisly material. In a picture from 2012 that was clearly staged, he was photographed next to a dead body, while he was reading the Koran. In a more recent picture from the ISIL offensive in May 2014, he posed with five severed heads belonging to Jabhat al-Nusra fighters and wielding a bloody knife in an upraised hand. He is known to be schizophrenic with a history of drug abuse. The account is still active. Dead babies are his recent fascination.

@ITSLJimmy also uses the names “Abu Klashnikov”, “Terrorist”, and “Lyricist Jinn”. He reportedly left the United Kingdom in February 2014, abandoning his attempts to make a career as a rapper. He is Abdel-Majed Abdel Bary, 23, whose family lives in Maida Vale, a wealthy West London suburb. His father is a former Guantanamo Bay detainee.¹³ Allegedly, “Lyricist Jinn” was radicalized by Anjem Choudary’s group. Accounts belong to Anjem Choudary’s shell companies appear prominently in ITSLJimmy’s Twitter stream.

@khorasani belongs to Abu Layth Al-Khorasani, who died in February 2014. He was allegedly the leader of a British fighter group in ISIL. He came to Syria from Afghanistan in the second half of 2013, when he started posting using his online name. His real name was Anil Khalil Raofi. He was a 20-year old engineering student from Manchester. Abu_Qaqa, also on the list of the top twenty scores in the Twitter network, was his friend. “Abu Qa’qaa” who was injured in the same incident that killed Ifthekar Jaman.

Abu Suleiman @MrJaman_ appears to have been set up in Jaman’s honor, by someone in Portsmouth. A lot of the content in this account is reposted, and there is no evidence in this case that the account holder has been to Syria.

@Fulan2weet allegedly belongs to a Dane in Syria, a claim that we are skeptical about. The account is still active. Abu Fulan appears to be in Raqqa.

@Taimiyyah is partially dedicated to worshipping Anwar Al-Awlaki and AQAP, the Yemen-based branch of Al Qaeda. We assume that this account is managed by someone based in the United States. The person uses the alias Abu Khabbab al-Misri.

@Abu_Muhajir1 is Abu Turab al-Muhajir, a 26-year old Canadian. He has had close relationships with several Canadian suicide bombers and the American suicide bomber, Moner Mohammad Abusalha, and several now dead British fighters. He gives interviews to journalists and claims to have traveled to Syria with 80,000 dollars. He has admitted to being a high school teacher from somewhere in North America. He switched from Jabhat al-Nusra to ISIL in late 2013. On December 21, he tweeted:

“Internet, Restaurants, Cars, iPhones...Allah has made Hijra and Jihad in Sham so easy...why are we still clinging to the Earth and hesitating?” The account is still active. It operates in tandem with Abu Turab’s Ask.fm account, where he provides advice on what to pack for jihad and how much money to bring. (“Bring as much as you can. But don’t worry. The brothers will take care of you.”)

Figure 2. Who are they?

United Kingdom. Three of the most important English-language organization-sponsored Twitter accounts belonged to affiliates of Al-Muhajiroun.

Three more accounts were the English-language or mixed English-Arabic accounts associated with the core terrorist organizations in Syria and Iraq: ISIL and Jabhat al-Nusra. “De Wahre Religie” is the Dutch branch of the Germany-based mother organization but may now have become a shell company in Choudary’s corporation. The use of English is clearly important to the popularity of the accounts. The Dutch account has only a small following in comparison to the others. The organizational accounts generally do not follow other accounts and primarily disseminate information to followers. SalafiMediaUK was the only one that emphasized the distribution of videos.

What Do They Tweet About?

For the analysis of content posted on these individuals’ accounts, we analyzed their most recent ten posts. Not all accounts had ten tweets in them, so the selection method yielded a total of 563 tweets. Many of these posts were made on the same day and therefore reflect a narrow time period around mid-March 2014. This was before ISIL established a foothold in Iraq and the content is far less graphic than the image stream of beheadings and crucifixions that followed the declaration of the Islamic State in June.

Interestingly, four out of every five tweets reported from the war zone made references to *jihadist* dogma. We assumed that Twitter would lend itself to more practical communications and personal contacts to friends back home. As it turned out, this was largely not the case. The Twitter feeds also contain a great deal of content that distills *jihadist* dogma in very simple terms, sometimes by means of a picture of the account holder pointing his index finger to the sky, alone or in the company of fellow fighters.

Their Twitter usage is surprisingly comparable to the way *jihadists* used online forums in the Web 1.0 environment. Proselytizing and instruction in the proper understanding of the *jihadist* belief system are priority themes. The continuity of the messaging is striking, even as the technology has changed dramatically.

The content of tweets was reviewed and coded based on a classification scheme derived from previous analyses of the content of *jihadist* online forums. These have generally been found to emphasize religious instruction and discussions of *jihadist* dogma.¹⁴ The primary content of the messaging was the focus. Coders were told to summarize the primary meaning of a specific tweet—whether a picture or a text—and were allowed to code only one category. A trial test was held to assess how consistently the team assessed content following coding instructions. In this case, in more than four out of five times coders made the same coding decision.

The categories used were:

- Religious Instruction—includes references to *fatwas*, religious edicts, scholars, prominent religious figures, Osama bin Laden or other prominent *jihadists*, or quotes from scripture. This category also included religious advice.
- Reporting from Battle—includes pictures of dead martyrs, pictures or discussion of battles, reporting current locations and/or activities related to battle and references to incidents in Syria or to specific battle-related incidents outside of Syria. Also includes providing information about how make it to the field of battle (i.e., recruitment).
- Interpersonal Communication—includes regular conversation, discussion of prior communication between the account holder and other participants in the Twitter chain, or references to anticipated future communications.

Table 3
Primary content of Twitter postings

Twitter usage	# of tweets	% of total
Religious Instruction	217	38.54
Reporting from Battle	227	40.32
Interpersonal Communication	101	17.94
Threats against the West	3	0.53
Basic Tourism	15	2.66
Total	563	100.00

N = 563 tweets from 59 accounts. Eighty-three percent reliability between coders.

- Tourism—encompasses topics related to the everyday life of the *jihadist*, for example reporting what they ate for dinner, or posts with tourist-like pictures (not related to battle).
- Threats Against the West—any specific and direct threats made against Western countries.

The analysis of the content of the accounts provides suggestive evidence of significant ideological conformity in the content of the communications (see Table 3). There are thousands of Western foreign fighters in the conflict zone. Why have these particular fighters been trusted to maintain online activity? Their ability to stay on message may be assumed to be an essential qualification. We infer that it is a select group of fighters who engage in this particular type of social media *jihad*.

Table 4
Content in pictures and videos

Image content type	Number of videos/photos	Percent of all(%)
Prominent <i>Jihadist</i> figures (e.g., Bin Laden or Awlaki)	286	12
Denigrating the Assad regime and other enemy pictures	142	6
Innocent victims (e.g., dead children and women killed by the enemy)	171	7
Glorifying martyrdom	164	7
Graphic pictures of retribution	93	4
Territorial control and combat	380	16
Lifestyle and brotherhood among the fighters	321	13
Other	834	35
Total	2,391	100

N = 13 Twitter account; 2,391 individual tweets containing picture images.



Figure 3. “Abu Muthanna” holding a jar of Nutella pictured in a store in Syria (from @GuyVan-Vlierden).

Pictures as Propaganda

Social media is pictorial—images are sent and received containing messages that are supportive but that often contain deeper meanings or that respond to fears or aspirations that cannot be openly stated. Out of over 150,000 posts, pictures were used to convey a message in nearly 5,000 posts, and videos were used in over 5,000 posts. Table 4 summarizes the results of our content analysis.

Images convey information but they are also symbols. The widespread use of pictures featuring the senders—“selfies”—or showing the dead bodies of the vanquished enemy tell a different story. The inanity of the pictures from the Syrian war zone is often jarring. A French kid stands in a store with his gun in one hand and a jar of his favorite hazelnut spread in the other (see Figure 3). Pictures of hanging out with the bro’s over pizza, guns at

hand, are common. At one point, pictures of cats were found all over Twitter. Eventually, corpses became the dominant pictorial element. The pictures are often clearly staged. One picture has the sender studying the Koran with a dead body laid out behind. Previously, most Westerners wore baklavas to conceal their identities but in March 2014, and in the following months, full-face pictures began to appear.

To better understand and assess the extraordinary use of images in the foreign fighter communications, we developed a typology for images and trained students to code the images contained in the captured tweets based on the meaning or message of the images. The classification schemes allowed coders to attribute more than one meaning to a particular image. This proved a difficult exercise. A trial showed that the coders could not agree on the interpretation of a particular image in one out of every four cases. Of the image content, 35 percent was classified as other. This included reproductions of news broadcasts and screenshots of blogs that were disseminated over Twitter.

Thirteen of the 59 accounts accounted for over half of the media content posted by the Twitter account holders. (The concentration of pictorial content may be taken as another indicator of a selective communications strategy.) The result of the content analysis showed that, for the most part, the images—videos and photos—corroborated the ideological messaging of the texts posted. Pictorial content for the most part praised the leaders of the movement and provided verification of the victories of the *jihadists* and the forward march of the movement, while the enemy was denigrated and dehumanized.

The most graphic pictures send a message of unconstrained power: the power of the fighters is supreme and the enemy is worthless. Particularly, Osama bin Laden's old jingle about "we love death more than you love life" is reformulated for Twitter. Dead *jihadists* are often touched up and presented in softened tones with a half-smile on their face and lovingly buried. Enemy corpses are gruesomely depicted. Overall, these shockingly violent pictures comprised only just over 10 percent of the content. (A reanalysis after the declaration of the Islamic State in Iraq may produce a different ratio between lifestyle pictures and images of the vanquished enemy).

Executions communicated via Twitter are a new medium of psychological warfare. Pictures of crucified men started to circulate on extremist social media sites in mid-June. One was hung out on a clothesline. Another man was put up on metal bars. And then, at the end of the month, there followed a picture of eight men hung on crosses in a dusty town square. Few news outlets reproduced the pictures but type "crucifixion" and "Syria" in Google, and they are easily found. The crucifixions coincided with the start of Ramadan, the declaration by ISIL of a new *jihadist* state in Iraq and Syria, and the promotion of its chief, Abu Bakr al-Baghdadi to the position of "caliph" and "leader for Muslims everywhere."

The auto-da-fé reportedly occurred in Deir Hafer, a town east of Aleppo, on Saturday 28 June 2014. An announcement from ISIL accompanied the horrific images. The victims were Muslim rebels from the anti-Assad groups and were punished for having fought against the *jihadists*. A ninth man was executed and crucified in another town on the same day. A few months later there followed an image of a soccer field with the severed heads of Syrian army soldiers strewn around as if emptied out of a bag. The picture stemmed from an attack on the "Division 17" army barracks used by the Assad-regime. That too serves a tactical purpose, this time locally—the spreading of fear.

The medium has changed from the days of the Afghan Arabs and the *mujahideen* who came to Afghanistan during the Soviet–Afghan War to help fellow Muslims fight against the communist Afghan government and the Soviet Union. However, the core message remains the same. It echoes the preaching of Abdullah Azzam (1941–1989), whose injunction that

Table 5
Ten most popular accounts in the Western fighters' lists of followings/followers

Twitter handle	Twitter name	Active/Not active	Degree centrality score
@RadicalIslamist	Millatu Ibrahim	Not Active	52
@Amaatullahearly	Umm Handhallah	Not Active	48
@Abubakr1924	Abu Bakr Al-Kashmiri	Active/Protected	46
@AbdulNassery	Abdul Nasser-Yassin	Active/Protected	43
@ShamiWitness	Shami Witness	Active	43
@_IraqiWitness	The Iraqi Witness	Active	43
@Muddathir5	Muddathir أين الرجال الأمة	Active	42
@Muwahhidah_	؟؟ https://twitter.com/Muwahhidah_	Active	42
@UmmMuthannah	Umm Muthannah	Not Active	42
@Greenbird313	Umm Amatuallah	Not Active	42

jihād was not *fard kifāya* (collective duty), which was the conventional wisdom among the *ulema* at the time, but was *fard ayn* (individual duty) that all Muslims must perform. The notion that all able-bodied Muslims must wage *jihād* anywhere Muslims were being oppressed by an outside force is foundational to contemporary *jihādism*.¹⁵

The Network at Large

Beginning with the 59 starter accounts, the snowballing method allowed us to tunnel into the network-at-large and determine who was the most popular among their lists of followers and the accounts they were following. The ten most popular accounts in the secondary network are listed in Table 5.

Our findings largely but not wholly corroborate the conclusion of a team of researchers at King's College London. Based on a study of 86 Facebook accounts and 35 Twitter accounts, Joseph A. Carter, Shiraz Maher, and Peter R. Neumann found that "disseminators"—defined as unaffiliated individuals who are broadly sympathetic with the *jihād* insurgents in Syria—play a large role in providing information about the conflict.¹⁶ They pointed to two preachers in particular as important figures: Ahmad Musa Jibril, from Dearborn, Michigan, and Musa Cerantonio, a Melbourne-based preacher. Both turned up in our analysis but proved far less important than a handful of women and three English-speaking Web activists known as "RadicalIslamist," "ShamiWitness," and "IraqiWitness," together with four other twitter account holders. See Figure 4 for more detailed information about the most popular Twitter accounts.

Most if not all of the account holders appear to be based outside the conflict zone. Three accounts were managed by women: @Amaatullahearly, Umm-Muthannah, and @Greenbird313. "Umm Handhallah" has several Twitter accounts (e.g., <https://twitter.com/AmaatuLlah>). She appears to also control "@greenbird313." Probably

“@RadicalIslamist” was a semi-official account in the Al-Muhajiroun fold. In April “RadicalIslamist” complained about having been cut off by “@Islamic-States” and asked for advice on how to delete old tweets. Another account holder promised to help, noting that English was not the first language for “@Islamic-States.”¹⁷ The account is now closed.

“@Shamiwitness” adopts the stance of an analyst but a staunch ISIL supporter.¹⁸ He also runs a blog spot and has been commenting on the Syrian civil war since late 2011. The content includes retweeted links to videos of beheadings, suicide bombings, and pictures of dead “Sunni children” killed by the US and “the Shia.” ShamiWitness has close to 12,000 followers—and follows only just over 800 accounts, a ratio of followers-to-following that makes him a strong “influencer” in the world of Twitter. Based upon his time patterns and linguistic indicators, ShamiWitness appears to be operating out of the United Kingdom.

“@AbuBakr1924” appears to have sworn allegiance to al-Baghdadi and is firmly in the ISIL camp. He too maintains an Ask.fm account. His family is Kashmiri, and he appears to be British. He is a hyperactive tweeter with about 1500 followers, a significant number given that only approved viewers have access. Pictures posted on his account are accessible through Google. They include the usual mix of hangings, sleeping fighters with their guns at hand, and dead children. He may be in Iraq.

“@AbdulNassery”—the account is protected. Abdul Nasser-Yassin appears to be Palestinian and claims to be in “Sham,” greater Syria.

“@IraqiWitness,” who appears to be a Briton, is also a member of an open jihadist forum, “Islamic Awakening” where he has energetically debated the ISIL v. Jabhat al-Nusra split.¹⁹ His Twitter feed contains deceptive pop culture references. He appears to be critical of ISIL.

“@Muddathir5” appears to be American. An ISIL supporter.

“@Mawahhidah_” tweets in both Arabic and English. Acts as a disseminator of ISIL material. Appears to be based in the United States.

Figure 4. Ten most popular Twitter accounts in the Western foreign fighters’ Twitter network.

based in the United Kingdom, she disseminates very violent material on behalf of ISIL. She appears also to be a fan of Abu Qatada, a Jordanian cleric, based in London for many years who was known as bin Laden’s European *emir*. She is probably the most popular female disseminator. We could not settle the identity of UmmMuthannah who sometimes tweeted in Swahili.

The “Umm” Factor

The prominence of women and accounts belonging to individuals based outside the conflict zone was a striking feature of the at-large network. Some of the women are known to be or to have been in Raqqa or in other locations held by the insurgents in Syria and, presumably, Iraq.

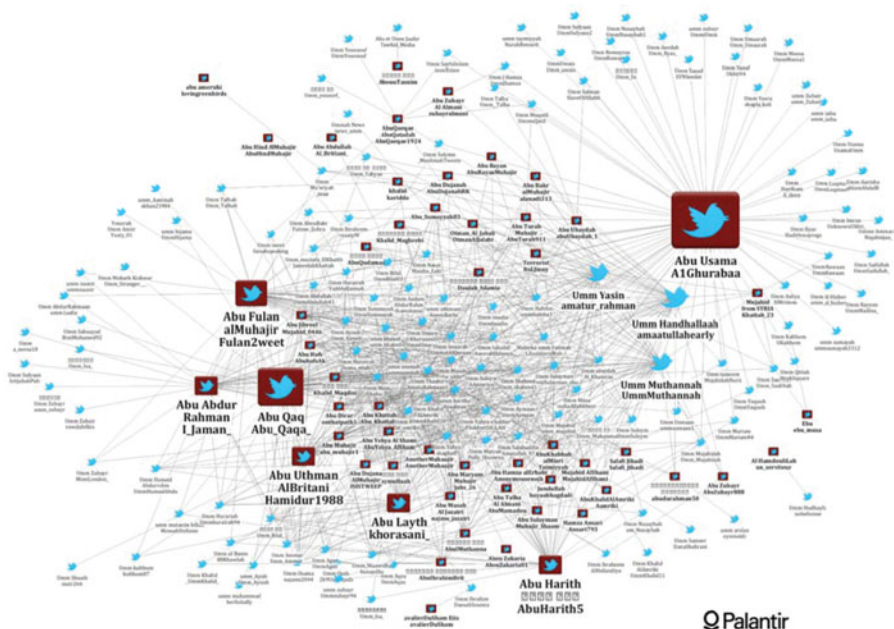


Figure 5. Twitter network of female supporters and wives of Western foreign fighters. Foreign fighter accounts in red. “Umm” accounts indicated by Twitter’s blue bird.

“Umm” is an honorific name, used to address women as the mother of certain persons—usually the oldest son. Among the *jihadists* it is a female *kunya*, an alias. We are assuming that the use of the female *kunya* generally accurately describes the gender of the person but occasionally accounts appear to pass between male and female posters, meaning that, at least occasionally, men may be posting under a female alias, and perhaps vice versa. About a dozen women in our data set are social media propagandists for the *jihadist* insurgents. Our data set captured mostly English-speakers but a number of Belgian and French women are also prominent micro-bloggers. Graphing the network of the “umms” showed a high degree of integration between the female posters and the top network accounts belonging to the foreign fighters (Figure 5). The accounts marked in red belong to accounts belonging to the Western foreign fighters in Syria and Iraq.

“Umm” accounts (130) were found in the lists of followers and accounts being followed among 55 Western fighters’ Twitter accounts, representing 1,027 links in the network above (Table 6). Online, women are mobilized as partisans and in tactical support roles to an extent far surpassing their involvement in any previous *jihadist* insurgency.

The “umms” generally work as disseminators, passing on content from other accounts. “Umm Handhallaah” tweeted to critics of the new “khalifah’s” appointment process: “Q: Jus curious those who reject #IS restoration of #Khilafah, how did the think it will be done?! Whole Ummah coming together & naming a leader?”

Blending *jihadist* rhetoric and the Internet speak of millennials, her argument is that since democracy is disallowed, holding an election is the wrong answer.

Talking back to the U.S. government’s “Think Again Turn Away” campaign is a favorite activity among the “umms.” One posting by the U.S. State Department was subject to a sarcastic reply:

Table 6
Most popular “umm” accounts among Western foreign fighters on Twitter

Rank	Top ten accounts	Raw	Scaled
1	Umm Handhallaah amaatuLlah	48	0.70149254
2	Umm Muthannah UmmMuthannah	42	0.6119403
3	Umm Yasin amatur_rahman	39	0.56716418
4	Umm Musab the_ukht	31	0.44776119
5	umm haritha Ayaalwan	29	0.41791045
6	Umm Imaarah UmmatAlQuraan	28	0.40298507
7	Umm Salsabil Aseerahfildunya	27	0.3880597
8	Umm Shaheed Umm_shaheed1	26	0.37313433
9	umm usamah ummusamah	25	0.35820896
10	Umm Umara Khorasani UmmUmarah	24	0.34328358

Of the accounts, 130 were identified that contained “Umm” in the Twitter handle among the Western foreign fighter’s lists of followers. These ten represent the accounts that came up most frequently.

Umm Handhallaah † @AmaatuLlah Jun 25 @ThinkAgain_DOS

“U the one to talk Pfft! After killing us in millions & continuing to do so. Stop pretendin u give a hoot about muslim blood.” (Spelling as in the original).

The content of the umm’s accounts strains to make extremism appear like a normal life-style decision. An example is a posting of pictures with their children dressed in ISIL fan gear, similarly to how a Manchester United fan might dress up her kids for fun. The use of children as advertisements for the extremist movement’s life-style has become an increasingly common element of the social media propaganda. We have obscured the faces of the children, which are not obscured on the original post (Figure 6).

Interpretation of Findings and Conclusion

Our previous research on social media usage by *ihadists* in Western Europe highlighted their preference for YouTube, a decentralized and low cost file sharing program that nonetheless is sensitive to controlled dissemination of content.²⁰ What appeared to be a bottom-up movement to share *ihadist* videos was, it turned out, the product of a tightly controlled outreach effort by *ihadist* organizers. Based on an analysis of over thirty *ihadist* YouTube accounts and their subscribers, we also concluded that an architecture of reposting has been constructed to build redundancy. Providing protection against government efforts to suppress content, this is a critical feature of the online networks. Such a high degree of coordination existed that it was improbable that it could have occurred by chance. A similar architecture of control and deliberate redundancy can be detected in the Twitter networks of the Western foreign fighters, but on a far larger scale.

Twitter is used for purposes of recruitment and indoctrination, as well as to build a transnational community of violent extremism. It is also a means of psychological warfare directed at distant foes as well as local enemies—Kurds, competing rebel fighters, and regime forces.



Figure 6. Children dressed in ISIL fan gear featured in Twitter feed posted on *jihadist* women's network. *Source:* https://twitter.com/Doula_News/status/460333862438977536/photo/1.

Twitter is also used to drive traffic to other social media platforms. Supporters back home follow the fighters who post original content and retweet content from organizational accounts. Information flows from organization accounts in Arabic and English via accounts of foreign fighters to a broader network of disseminators (Figure 7). The different layers of microbloggers add localized content. The dissemination of pictures of brutalization ranging

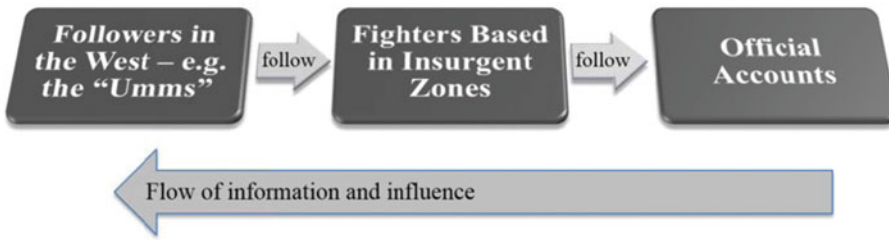


Figure 7. Schematic model of information flow in Western foreign fighters’ Twitter network.

from hangings to beheadings to mutilated corpses is mixed with pictures of happy children in a seamless stream of terrorist messaging intended to intimidate the public in the near war zone as well as among “the far enemy,” the Western publics.

A number of tentative conclusions may be inferred from the evidence. First, the individual accounts managed by Western fighters in Syria are ideologically conformist. Twitter is used to propagandize for core *jihadist* tenets that are translated into symbolic images for a generation of social media users who prefer pictures to text. Second, a high degree of content control is exercised throughout the micro-blogging networks. Individual and official accounts work in parallel and are tightly integrated.

Third, we are able to partially confirm the findings of the King’s College London regarding the importance for the network-at-large of individuals and groups who based outside the combat zone, but we differ as to who figure as the most important disseminators. The King’s College team identified what they described as clerical authorities, specifically, two preachers—one Australian and the other United States–based—as playing an independent and critical role in driving the information network of Western foreign fighters. Conversely, we find that authority derives primarily from organizations in the *Al-Muhajiroun* network and from media accounts belonging primarily to ISIL and secondarily to *Jabhat al-Nusra*. With over 7,000 followers in the network, Anjem Choudary stands out as one of the most influential figures.

The discrepancies may in part be explained by differences in methodology. We started with a large set of initial nodes—56 account holders—and consequently obtained a different “slice” of the Twitter-based networks. The time of the data collection may also influence the results. The King’s College team collected their data over a period of 12 months ending in February 2014. Our data collection was done January through March 2014. Who exactly emerges as the central players in a network is highly contingent on the initial framing of the network determined by the data collection procedures. An important substantive difference, however, has to do with the role of sponsored *jihadist* accounts in driving the content and distribution of the information flow. We found that official accounts belonging to ISIL and *Jabhat al-Nusra* are tightly integrated with other types of accounts. Disseminators, understood as individuals who are based outside the conflict zone and act as volunteer “witnesses,” help build redundancy by spreading the material, often posting and reposting material provided by the feeder accounts belonging to organizations and fighters based in Syria.

The purpose of the seemingly innocuous tweeting of cat pictures and hanging around with friends, blended with staggering depictions of brutality, is to drill home one message: You belong with us because *jihad* is an individual obligation for every Muslim. The content conveys that fighting—and dying—will give your life meaning, and is just plain fun and

similarly exciting, but “better,” than playing video games like “Call of Duty” on the couch at home. The secondary messages piggy-backing on the Twitter streams range from the dehumanization of other Muslims (Shi’a in particular) and the bravery of the righteous fighters.

Twitter serves the same essential purposes for terrorist organization that bookstore and Internet forums played in the past: the proselytizing and recruitment of followers, firming up the resolve of believers by engaging them in the distribution of propaganda and educating them in dogma. But social media have also added new capabilities that dramatically expand the organizations’ reach and efficiency.

Recruiters can use social media to outsource recruitment to hubs of militants located outside the war zone. Broad audiences can be reached directly and amplified by the echo chamber of lateral duplication across multiple platforms at low cost. A handful of hyper-active online activists can quickly and at low cost distribute massive amounts of material. Recruiters can use the networked platforms to reach new audiences and then take the communications to take networked communications private, directing potential recruits to encrypted contact points.

Social media also eliminated dependency on the mainstream media, turning journalists into ideal victims rather than useful conduits for spreading the message. The Foley execution footage, for example, is available on news sites and far-right sites, downloaded and re-uploaded by online shock jocks. Terrorist-controlled social media now drive the “slow media” coverage. Captives of the social media streams, mainstream media have become more vulnerable to misinformation campaigns and tactics of deception and misinformation. Social media easily amplifies false images of strength.

The transformation of social media into an offensive strategy of psychological warfare is ISIL’s particular innovation of terrorist strategy. Across the Middle East, phones have become the most commonly used instrument for obtaining reliable news. In this context, ISIL’s broadcast of Twitter feeds of executions and crucifixions carried out in Aleppo and Deir Hafer turned social media into a tool of offensive psychological warfare and battlefield tactics.

The pictures of staggering brutality that accompanied Abu Bakr al-Baghdadi’s declaration of the formation of “the Islamic State” at the end of June 2014 showed up toward the late part of our data collections. Had the collection been extended through the subsequent months, it may be assumed that we would have detected a shift from recruitment and ideological messaging to the instrumental use of social media for direct terrorist purposes. Social media have proven highly effective as a messaging tool and also as a terrorist medium for intimidating local populations, the “near enemy,” in the insurgency zone and provoking outsized fear far away from the war zone.

Acknowledgments

Special thanks to Nathaniel Barr, Wouter van der Eng, Katherine Dowling, Aileen Finnin, Zachary Herman, Nathan Needle, Adrienne Roach, Ula Rutkowska, Ryan Yuffe, and Aaron Y. Zelin who assisted on the project.

Funding

The research for this article was supported by a grant from the U.S. Department of Justice, Office of Justice Program, the National Institute of Justice (Award 2012 ZA-BX-0006). Jytte Klausen (PI), “The Role of Social Networks in the Evolution of Al Qaeda-Inspired

Violent Extremism, 1993–2013.” Opinions or points of view expressed in this article are those of the author and do not necessarily reflect the official position of policies of the U.S. Department of Justice.

Additional funding was provided by Brandeis University, the Theodore and Jane Norman Fund for Faculty Research and Creative Projects in Arts and Sciences, and the Research Circle on Democracy and Cultural Pluralism. Support from Palantir Technologies is also gratefully acknowledged.

Notes

1. Gabriel Weimann, *Terror on the Internet: The New Arena, the New Challenges* (Washington, DC: USIP, 2006), p. 38.

2. Brian Michael Jenkins, *International Terrorism: A New Kind of Warfare* (Santa Monica, CA: RAND Corporation, 1974). Available at <http://www.rand.org/pubs/papers/P5261.html> (accessed 6 October 2014); Alex Schmid, “Terrorism as Psychological Warfare,” *Democracy and Security* 1(2) (2005), p. 138.

3. Edna Erez, Gabriel Weimann, and A. Aaron Weisburd, “Jihad, Crime, and the Internet: Content Analysis of Jihadist Discussion Forums” (Washington, DC: USDOJ, 2011). Available at <https://www.ncjrs.gov/pdffiles1/nij/grants/236867.pdf> (accessed 6 October 2014).

4. Jordàn Javier and Manuel R. Torres, “Internet y actividades terroristas: el caso del 11-M” (Spanish), *El Profesional De La Información* 16(2) (2007), p. 125.

5. *Combating Terrorism Center*, “Letter to Mullah Mohammed ‘Omar from Usama bin Laden,” (5 June 2002). Available at <http://www.ctc.usma.edu/wp-content/uploads/2010/08/AFGP-2002-600321-Trans.pdf> (accessed 6 October 2014).

6. *Combating Terrorism Center*, “Letter to Abu Musab al-Zaraqawi from Ayman al-Zawahiri” (9 July 2005). Available at <https://www.ctc.usma.edu/wp-content/uploads/2010/08/CTC-Zawahiri-Letter-10-05.pdf> (accessed 6 October 2014).

7. *Combating Terrorism Center*, “Unknown (probably Usama bin Laden or Atiyatullah Abu ‘Abd ar-Rahman) Letter to Nasir al-Wihayshi,” (N.d.). Available at <https://www.ctc.usma.edu/wp-content/uploads/2012/05/SOCOM-2012-0000016-Trans.pdf> (accessed 6 October 2014).

8. John Arquilla and David Ronfeldt, *Networks and Netwars. The Future of Terror, Crime, and Militancy* (Santa Monica, CA: RAND Corporation, 2001).

9. James Bamford, “The Most Wanted Man in the World,” *WIRED* (August 2014). Available at <http://www.wired.com/2014/08/edward-snowden/#ch-7> (accessed 6 October 2014). In an interview with *Wired Magazine* Edward Snowden asserted that the 2012 Syrian shut-down was the result of a botched U.S. intelligence operation attempting to put intercepts on one of the main Syrian Internet providers. Akamai, an Internet traffic analysis company based in Cambridge, MA, routinely releases assessments on Twitter, see https://twitter.com/akamai_soti/status/491225130316472320.

10. Doug Madory, “Amid Raging Violence, Iraq Orders Internet Shutdowns,” *Dyn Research* (13 June 2014). Available at <http://research.dyn.com/2014/06/amid-raging-violence-iraq-orders-Internet-shutdowns/#update01> (accessed 6 October 2014).

11. *GlobalTT*, “Coverage: Syria.” (N.d.). Available at <http://www.globaltt.com/coverage-countries/Syria> (accessed 6 October 2014).

12. Nina Zipkin, “Have 1,000 Followers? You’re in the 96th Percentile of Twitter Users,” *Entrepreneur* (19 December 2014). Available at <http://www.entrepreneur.com/article/230487> (accessed 6 October 2014).

13. Erez et al., “Jihad, Crime, and the Internet”; Edna Reid, “Analysis of Jihadi Extremist Groups’ Videos,” *Forensic Science Communications* (Washington, DC: FBI, July 2009).

14. Abdullah Azzam, “Join the Caravan,” in Gilles Kepel and Jean-Pierre Milelli, eds., *Al Qaeda in its Own Words* (Boston: Harvard University Press, 2009), p. 115.

15. Joseph Carter, Shiraz Maher, and Peter Neumann, *#Greenbirds: Measuring Importance and Influence in Syrian Foreign Fighter Networks* (London: The International Centre for the Study of Radicalisation and Political Violence, King's College, 2014).

16. Jytte Klausen, Eliane Barbieri, Aaron Y. Zelin, and Aaron Reichlin-Melnick, "The YouTube Jihadists: A Social Network Analysis of Al-Muhajiroun's YouTube Propaganda Campaign," *Perspectives on Terrorism* 6(1) (2012).

17. *The Daily Mail*, "The Scum Stole Our Cash: 'Hip Hop Jihadist' Who Left £1m London Home to Fight in Syria Complains on Twitter of Being Kidnapped, Tortured and Robbed by FELLOW Islamists" (9 March 2014). Available at <http://www.dailymail.co.uk/news/article-2576695/Hip-hop-jihadist-claims-kidnapped-tortured-robbed-fellow-Islamists.html> (accessed 6 October 2014).

18. "RadicalIslamist" is no longer active but the tweet is available on qaster.com, a South Korean-based website that aggregates question-and-answer threads from Twitter and makes them available in a searchable Internet archive. For more information see www.qaster.com (accessed 6 October 2014).

19. Michael B. Kelley, "One of the Most Popular Sources on Syria Happens to be an Extremist Supporter," *Business Insider* (20 January 2014).

20. To view the full discussion on the split between Jabhat al-Nusra and ISIL, see <http://forums.islamicawakening.com/f18/ISIL-division-salafi-jihadis-vs-takfeeri-jihadis-70873-print/>