Between Imagined Reality and Real Terrorism

Daniel Cohen

This essay focuses on how the Islamic State and other non-state actors use media and technology to influence individuals and groups by combining Internet activity with activity in the real world. The Islamic State functions in an actual physical and geographical space, in cyberspace, and within the conscious realm. Eachserves the Islamic State's communications, propaganda, psychological warfare, and recruitment, influencing individuals and groups and inducing them to carry out "spontaneous" acts of terrorism. The way the Islamic State uses the Internet in general and social media in particular to shape reality and promote its terrorist objectives differs fundamentally from the ways in which terrorist organizations used technology in the past. Other non-state actors and terrorist organizations are learning to use media and technology, imitating the successful model of the Islamic State.

Keywords: cyber, social networks, terrorism, public perception, al-Qaeda, cyberspace, the Islamic State, Internet

Introduction

The evolution of contemporary terrorism in the form of the Islamic State correlates with the rapid changes that society is undergoing and effectively compresses space and time.[1] The Islamic State functions in three spheres: a geographical and physical space, cyberspace, and in the conscious realm, and applies its capabilities in all three spheres to shape its public image. This is manifested by the use of Salafist ideology, the seizure of territory, and the establishment of the Islamic caliphate. In the geographic and physical space, a proto-state has been created in parts of Syria and Iraq,

Daniel Cohen is a research fellow at the Institute for National Security Studies (INSS).

and Islamic State satellites have been created in battlefields in Libya, Nigeria, Yemen, and Afghanistan. Furthermore, in this space, the Islamic State engages in military activity and terrorist attacks aimed at enemy targets in the different arenas and to promote their political agenda. In cyberspace, the Islamic State has constructed operational infrastructures that it uses systematically in order to promote its objectives. The conscious realm is located between the physical space and cyberspace. The Islamic State employs both physical and virtual actions, such as using historic and religious symbols and markers of sovereignty; erasing other religions and ideologies; and demonstrating extreme, overt brutality in order to shape the public's perception of the Islamic State within the conscious realm. To use a technological metaphor, cyberspace and the physical spaces are the hardware of the Islamic State, while the conscious realm is the software it uses to manipulate the processing of information and symbols.

This essay focuses on how the Islamic State and other non-state actors use media and technology to affect individuals and groups through a combination of online and offline reality, inside and outside the world of the Internet.[2] This essay posits that the Islamic State's use of technology and media to shape its public image and to promote its terrorist objectives differs fundamentally from the ways in which the Internet has been used in the past by other terrorist organizations.

The Islamic State appeals to a wide range of individuals from Muslim communities throughout the world, and presents them with a twisted version of reality by creating and disseminating its own content through campaigns in the media and social networks. Concurrently, the Islamic State is a magnet for recruitment in areas it controls. Non-state actors and terrorist organizations, such as al-Qaeda, Hamas, and Hezbollah, are learning from its various techniques and are seeking more effective tools in the virtual space. Similar to the business world, these players are also expanding their Internet and social media toolbox in ways to facilitate their activities. Their cyber activity supports their actions and terrorism in the real world.

The Internet and the Revolution of the Social Networks

The slow, decentralized mechanical world that came into being in the second industrial revolution included the industrialization of most human activity and the replacement of human and animal labor with machines. In recent years, this world has been replaced by a rapid, electromagnetic,

simultaneously unified, and networked one that allows connections across physical and mental borders and blurs the distinction between the two. The appearance of the social media in 2005 heralded a new stage in the development of the Internet. Modern information technology, used by various protest movements throughout the world, has a decisively influential nature; it allows the rapid, transparent transfer of information and serves as a key tool in promoting and changing political and social processes. Even relatively small groups and those lacking a clear hierarchy manage to demonstrate flexibility and sophistication, and quickly reach the masses through the virtual sphere.

An examination of the processes that led to the wave of protests throughout the world in recent years – from the Arab Spring in the Middle East to civil protests on socioeconomic matters all over the globe – points to the decisive importance of the Internet and social media as tools that can change society.[3] Since the Arab Spring, the Internet and social media have facilitated progress and change at the organizational level, while technological accessibility has enabled the development of sites and applications, including the creation of password-protected areas, accessible to close circles of influence; the use of instant, mobile message-sharing applications; and more.[4] This power is now in the hands of billions of people at some level or another, and it has changed the rules of the game from the ground up.[5] Almost two billion people around the world surf the Internet and use social media, and this number is growing and can be expected to increase in the next several years.[6]

Humankind created cyberspace, thereby establishing a global communications network that has significantly reduced the physical dimensions of the human environment. This means that technological and cognitive changes have led to accelerated speeds of human motion and traffic in cyberspace by means of contemporary computer networks. When surfing the Internet, the user's neural responses (i.e., the reactions of nerve cells in the brain to stimuli) and Internet information reach the user's consciousness at the same time.[7] The Internet allows the user to be simultaneously "everywhere and nowhere."[8] The connection between the Internet and the smartphone makes all information and communications available to people at any given moment regardless of their physical environment.

The Influence of the Islamic State on Thought and Practice in Salafist Jihadist Organizations

The appeal of fundamentalist groups to the public at large usually takes place within the framework of invoking general moral principles, injected with a sense of discipline, authenticity, commitment, and security. By compromising these principles, Islamist movements have created new marginal groups who are not only using more radical forms of violence and have expanded the scope of their terrorism, but have also radicalized the dichotomy between Islam and the West.[9] Dr. Abdullah Azzam and his heir, Osama Bin Laden believed that holy war or jihad against the infidel must be steered onto a parallel − sometimes alternative − track of war against "infidel regimes" in the Muslim world. In their view, jihad must embrace the entire world, and it is necessary to attack those who have seized control of areas where Islam prevails (such as Chechnya, the Balkans, and Palestine). Moreover, it is essential to damage the economy of the West, which is the source of the resilience of the "infidel regimes" within the Muslim world. Abdullah Azzam's vision was captivating, especially for the youth who were the first and second generation born in Western Europe to Middle Eastern and North African immigrants, and who failed to overcome the class barrier of their immigrant parents and grandparents. To them, Azzam and Bin Laden's call was like dew falling on parched ground.[10]

The upheavals that shook the Middle East in 2011 and toppled some of the so-called infidel regimes led al-Qaeda to call upon the masses to continue the revolution until all corrupt regimes had been ousted.[11] The Arab Spring allowed al-Qaeda to change its priorities and focus on internal jihad in order to shape new regimes throughout the Middle East and the Maghreb along the Salafist model.[12] A rogue faction of al-Qaeda initially formed in Iraq was quick to act; calling itself the Islamic State of Iraq and al-Sham (ISIS), it exploited the weakness of the sovereign state in Iraq and the collapse of Syria. Jabhat al-Nusra, the Syrian organization identified with al-Qaeda, and Ayman al-Zawahiri, Osama Bin Laden's heir as the leader of al-Qaeda, repudiated this move, thereby creating a rift between ISIS and al-Qaeda. In March 2014, ISIS launched a campaign on Twitter, calling to name the leader of ISIS, Abu Bakr al-Baghdadi as caliph.[13] ISIS's media managers used this campaign to examine how the Salafist jihadist community active on social media perceived the declaration. By the end of June 2014, ISIS spokesman al-Adnani announced Abu Bakr al-Baghdadi as the caliph of the newly established Islamic State in the Iraqi and Syrian

territories that the organization had conquered (the words "Iraq and al-Sham" were dropped from the organization's name).[14]

By the second half of 2014, the Islamic State had already spread over vast territories in northeast Syria and northwest Iraq; elicited oaths of allegiance from different Salafist jihadist organizations in Africa, Asia, and the Middle East; and established sleeper cells throughout the Muslim world, including within Muslim communities in the West. The Islamic State uniquely combines Salafist ideology with pragmatic practice, which serves the establishment of a sharia-based state, according to the ideal model of early Islam and the first four caliphs. The organization's practical approach to the establishment of an Islamic state sets it apart from al-Qaeda, its parent body; while al-Qaeda envisions the establishment of a world-encompassing Islamic state at some future date, by contrast, the Islamic State's existence is here and now. The Islamic State managed to realize the long-term goal that al-Qaeda and other proponents of the radical Salafist ideology failed to achieve – of imposing a sharia-based, Islamic regime by establishing facts on the ground and creating mechanisms of sovereignty. The Islamic State's informed use of cyberspace allows it to be omnipresent. It has created a sense of identification and emotional meaning among its supporters and has succeeded in recruiting many young people from all over the world to the battlefields in Syria and Iraq.

The Islamic State's Use of the Internet and its Influence on the Physical Sphere

Since the mid-1960s, the Middle East has seen a steady return to Islam. This trend has been nurtured by many processes and circumstances reflecting the weaknesses of the prevalent secular, nationalistic, and/or socialist ideologies and their inability to meet the challenges of the social and political realities in the Arab countries. Consequently, a supra-state Islamic identity started to take precedence within civil society, especially through its on-the-ground presence in mosques, charities, and community centers, while the state-based framework continued to be the basis of the Muslim and Arab countries, using a wealth of tools, such as education and the media, to shape its citizens.

Salafist movements, led by the Muslim Brotherhood, emphasized preaching and social activity from within the ruling system, cooperated with the rulers and official authorities, and seemingly recognized the necessity of the state's existence as part of the essential process of change.

Salafist jihadism developed out of the ideological foundations of the Salafist movements, but expressed a much more radical ideology,[15] marked by pronounced activism, including violence and militant jihad. As a result, organizations identified with Salafist jihadism were persecuted by state security services and forced underground, while taking care to cover any tracks, including electronic ones, which might lead back to them. Most communication was relayed by computer, in secure jihadist forums using anonymous encrypted communications networks. Al-Qaeda activists, for example, used encrypted chat rooms, including video game chats, as well as single-use SIM cards and satellite phones, to communicate and recruit new members.[16] Osama Bin Laden himself relied upon messengers to transmit information, making it difficult for many years for the US intelligence to locate him.[17]

Peter Singer has claimed that just as the Crimean War was the first telegraph war, and the Vietnam War was the first television war, the current wars – such as those fought in Syria and Iraq – are the first media technology wars. According to Singer, the growth in social media activity by jihadist organizations directly correlates to the increase in the use of cyberspace by the public at large.[18]

In the past, terrorists exploited the inherent advantages of cyberspace to transmit encrypted messages, recruit supporters, acquire targets, gather intelligence, camouflage activity, and so forth. In the networked era, a terrorist organization that seeks to recruit supporters and expand its presence needs to develop capabilities that will allow it to be flexible and change rapidly, and be able to adapt its message to focused target groups or the broader public. Islamic State activists realize that the social media and the various applications for transmitting instant messages are crucial tools for communicating between members and supporters as well as between different devices. Its communications strategy consists mainly of visible Internet activity designed to turn the Islamic caliphate into a focus of attraction and identification for Muslims all over the world. The Islamic State uses the Internet for several purposes, enabling members to communicate with each other while also serving as a platform for disseminating propaganda, engaging in psychological warfare, and recruiting new members. Moreover, through the Internet, the Islamic State is able to influence individuals as well as groups and induce them to carry out terrorist acts. These capabilities provide flexibility and speed, involve only a low signature, serve as a force multiplier, enhance public perception,

and make it possible for the Islamic State to be seemingly everywhere when, in fact, they are not.[19] Most importantly, the Islamic State's campaigns to shape public perception and disseminate propaganda through cyberspace quickly branded the Islamic State as the spearhead of global jihad.

An internal document of the US State Department, leaked to the *New York Times* in June 2015, revealed the many challenges the American administration faces in trying to battle the Islamic State in cyberspace.[20] State Department sources estimate that the nations fighting the Islamic State are not doing enough to foil the continued distribution of the organization's messages via the Internet. The document points to the lack of cohesiveness of the counter messages, the dearth of cooperation between the nations, and the slow and complicated pace of the battle. In contrast, the Islamic State is efficient and has a much faster response time in cyberspace than that of technological powerhouses such as the United States, the United Kingdom, and their allies, while it also preserves the cohesiveness of its messages with relative ease.

Aaron Zelin's study indicates that the Islamic State operates more than thirty media centers active in twenty-four provinces under its control.[21] On average, the media centers issue daily at least eighteen messages, including photos, videos, banners, news reports, radio broadcasts, and speeches, in mostly Arabic, followed by English, Russian, Kurdish, French, and Urdu.[22] Most of the media materials issued by the Islamic State in 2013 were produced and distributed by one communications center, al-Furqan Media, with the process having become more decentralized since then. Currently there are five media centers working under the Islamic State's propaganda and communications division, while the rest are provincial centers.[23] After preparing the materials, they are distributed via social media, jihadist forums, blogs and microblogs, video-sharing sites, and content-sharing sites.

In 2014, Twitter was one of the main tools for distributing the organization's materials. According to J.M. Berger and Jonathon Morgan, during the peak activity of the Islamic State on social media in the latter half of 2014, the number of Twitter accounts associated with its supporters reached an impressive 46,000. An inner circle of some 500-2,000 accounts belonged to heavy users, who operated in a coordinated fashion to maximize the organization's exposure and transmit its daily messages.[24] Instant message applications, such as WhatsApp and Snapchat, are other popular distribution tools, enabling users to upload and distribute photos and banners. One

of the advantages that the propaganda division of the Islamic State has in working in a decentralized yet synchronized fashion is the use of different Internet platforms as surrogates; maximizing the resources of one social network until the organization's accounts are closed or blocked compels the supporters to find a new social network and repeat the process.[25] Thus, Islamic State supporters have switched from Twitter to KIK and VK, then to Telegram and so on.[26]

All of the Islamic State's distribution methods over social media are supported by traditional news channels that continuously cover the Islamic State and inadvertently disseminate its messages. In most cases, journalists and news editors do not have any access to firsthand information about the situation in the Islamic State-controlled areas, and are forced to make do with messages fed to them by the organization's central and provincial media centers. Even on the rare occasions that they are allowed inside the territories it controls, there is tight supervision of the content, making it impossible for journalists to provide any objective coverage.

The Islamic State operates an internal thought police to suppress and foil attempts by human rights activists and others to disseminate information via the Internet or smuggle out photos, videos, and testimonies of residents depicting reality under the Islamic State.[27] Furthermore, the Islamic State monitors Wi-Fi use in the territories under its control and bans the use of private wireless networks.[28] The Islamic State's messages are presented in black and white terms, good versus evil, and the West versus Islam. In the Islamic State's execution videos, for example, victims are displayed as weak and despicable, and are forced to kneel as if they were guilty for having brought death on themselves, while the executioners are visually portrayed as larger than life. By controlling the flow of information in areas under its control, the Islamic State is able to successfully mold public perception, as it determines the way it is exposed to the rest of the world.

In the past, most communication between members of jihadist terrorist organizations as well as with potential recruits took place by computer, using secure means. Now, the Islamic State and other non-state entities heavily rely upon open communications to recruit followers, distribute propaganda, carry out psychological warfare, and achieve other goals. The Islamic State is able to operate in cyberspace to achieve many different ends, the main ones being:

a. *Encouraging radicalization*: Key messages are transmitted via magazines,[29] videos,[30] posters, and religious chants (*anasheed*).[31] In the areas controlled

by the Islamic State, videos made by its propaganda division are screened publicly. The Islamic State has also set up media desks in some major cities where it distributes booklets, discs, and flash drives with content designed to influence children and teens.[32] This aim is supported by activities in mosques and community centers.

b. *Recruitment:* The Internet serves as a magnet for recruiting young Muslims all over the world. The recruitment tactic of the Islamic State consists of projecting a unified, coherent, and simplistic message, which calls on young people to move to the Islamic State or engage in jihad in their countries of origin.[33] Chat platforms provide recruiters with access to many young people attracted to the Islamic State's narrative, and also enable one-on-one recruitments.[34] Islamic State recruiters also respond to people expressing curiosity in public forums and in a Q&A format. The Islamic State is a role model and inspiration for many young Muslims. From June 2014, when the establishment of the Islamic State was declared until March 2015, the number of foreign fighters coming to Syria and Iraq increased by 70 percent, while the pull of the Islamic State is felt in more than half of the world's nations.[35]
c. *Communications among members:* Encrypted software allows Islamic State members to communicate on the Internet securely and anonymously.
d. *Psychological warfare:* The Islamic State employs psychological warfare against the residents living in areas under its control in order to suppress dissent, deter subversive activity, and foil internal espionage. The Islamic State also uses psychological warfare in the videos and publications (magazines, weeklies, banners, and the like) that it shares via social media, intended to lower the morale and fighting spirit of its enemies, and affect their performance on the kinetic battlefield.[36] The videos and publications are also designed to instill fear in the local and international public and deter decision makers in the nations battling the Islamic State.
e. *Intelligence gathering:* The Islamic State gathers intelligence on its opponents, in order to wage psychological warfare against them and deter them. Intelligence is gathered through social media and then distributed as "hit lists," as in the case of the list of American military personnel, which included names, physical addresses, and email addresses. The Islamic State also engages in cyberattacks against the media and other sites identified with its opponents, so that it can leverage the media coverage and turn the media spotlight to the "hit lists." This

tactic is done to frighten those appearing on the lists and make them fearful about being a target of a terrorist attack.[37]

f. *Cyber terrorism:* The Islamic State engages in cyber terrorism against sites identified with the opposing governments and against selected communications channels as a means of maximizing its media exposure with a relatively low signature.[38] The Islamic State thus far has only carried out relatively simple cyber terrorist attacks, such as site destruction and denial-of-service attacks.

g. *Use of organized terrorism:* The Internet enables relatively secure communications in order to create terrorist cells and communicate among activists who have left the Islamic State and have returned to their countries of origin. In the series of attacks in Paris in November 2015, the terrorists also used cell phones apps to communicate with one another.[39]

h. *Inducing spontaneous, non-organized terrorist attacks:* Terrorist attacks carried out by "lone wolves" are deeply embedded in Salafist organizations. Salafists perceive the violent struggle against the "enemies of Islam" as a personal obligation both within their countries of origin and elsewhere.[40] Terrorist attacks in the United States, Canada, Australia, Denmark, Kuwait, Tunisia, and France in 2014-2015, which were carried out by Islamic State admirers, reflect the organization's ability to induce individuals and small groups through social media to carry out lone wolf attacks. The common denominator of these perpetrators is that they all surfed the social media where they were influenced by the organization's messages; indeed, most of these attacks have taken place since the Islamic State called upon Muslims to carry out terrorist attacks against the security forces and citizens of Western nations.[41] In a number of cases in which the perpetrators did not accept responsibility in the name of the Islamic State, the Islamic State's influence in motivating the perpetrator to commit the crime is discernable.[42]

The strategy of the Islamic State's media and cyber branches is the same as that of commercial enterprises: it has assimilated the use of cyberspace into its various communications platforms in order to improve its performance in the physical realm. The organization encourages radicalization in mosques and Muslim community centers in tandem with its activity in social media where it disseminates messages designed to create deterrence and wage psychological warfare. Mass recruitment campaigns, such as the one called "One Billion Muslims Support the Islamic State,"[43] reflected the Islamic

State's decision to take overt, focused action via social media in order to attract new recruits while at the same time establishing an infrastructure of recruiters who operate on the ground and help potential recruits access information, resources, and instructions.

The Islamic State has succeeded in controlling the battle over its image by shaping its own experience so that the world sees events in Syria and Iraq through the eyes of the Islamic State, and by not permitting other mechanisms that allow a more objective perspective of reality. As a result, the Islamic State has created a conscious gap between the narrow conceptual meaning of the visuals presented by the Islamic State and the interpretation of "what one sees," which requires broader cognitive processes.

Network-Based Changes within Terrorist Organizations

Terrorist organizations that have pledged their allegiance to the Islamic State, such as Boko Haram in Nigeria and Ansar Bayt al-Maqdis in the Sinai Peninsula, have also started applying various methods of communications, including the production and distribution of videos similar to the Islamic State's execution videos.[44] Other terrorist organizations have studied the Islamic State's methods and have released videos, magazines, and messages as part of their campaigns to shape public perception, disseminate propaganda, and engage in psychological warfare.[45] Hezbollah, for example, has built a communications network specifically for the battle over its perception. It includes more than twenty websites in seven languages delivering news and specialized content. Hezbollah also uses foreign social media and YouTube, but less so than the Islamic State.[46] Hezbollah also restricts media coverage in the areas under its control and persecutes human rights activists and the opposition, who try to provide a more objective picture of reality.

Terrorist organizations identified with al-Qaeda have exploited the wealth of possibilities offered by social media and have increased their Internet presence. For the past several years, al-Qaeda has published online magazines in English, such as *Inspire* (since 2010), to spread propaganda, recruit and instruct supporters, and provide study materials to those interested in joining the organization's ranks.[47] Overall, al-Qaeda is very active on the Internet, and its contents are distributed through sharing sites as well as closed forums.[48] Osama Bin Laden, the organization's founder, was part of the first generation to develop modern jihadist propaganda. Videotapes of his speeches were distributed to new followers, increasing

Bin Laden and al-Qaeda's exposure. The marketing of the organization's powerful image grew increasingly sophisticated when, in addition to the activity of a-Sahab – the organization's production company – members and supporters disseminated and screened propaganda CDs on hundreds of websites.[49] The most prominent figure in the second generation of al-Qaeda was Anwar al-Awlaki who addressed the West in English on YouTube, his personal blog, and his Facebook page.[50] Jabhat al-Nusra, the Syrian branch of al-Qaeda, distributes video clips and engages in other activity on social media, as do the more "moderate" Syrian rebel groups, such as Jish al-Islam (the Islamic Army), which also circulated online an execution video of Islamic State members.[51]

The Islamic State also serves as inspiration for Palestinian terrorist organizations, which are learning to create maximal exposure via the Internet and social media in order to transmit messages and recruit activists and supporters. Palestinian terrorist organizations have even started their own Internet incitement campaigns designed to induce non-organized terrorists (the so-called spontaneous, lone wolf attacks) to act. Hamas and the Palestinian Islamic Jihad both have run social media campaigns, which included videos and photos calling upon Palestinians to stab Jews, especially soldiers.[52] Hamas also controls and monitors the media materials issued in its name in order to maintain its image as leading the struggle against Israel. For example, in January 2015, there was a stabbing on bus number 40 in Tel Aviv. In his interrogation, the terrorist claimed that he embarked on the attack out of frustration with the events in Gaza during Operation Protective Edge and other violent events to which he had been exposed in the Palestinian media and specifically after watching Hamas-produced, Islamic content, replete with praise for those who carried out terrorist acts and thus "reach the Garden of Eden."[53]

Two Palestinian media campaigns, named *Ad'as* ("running over" in Arabic and a pun on "Da'ish," the Arabic acronym for ISIS) and *At'an* ("stabbing" in Arabic), appeared in November and December, 2014. Created by individual Palestinians not affiliated with any organization, the symbol of the *At'an* campaign was a threatening picture of Palestinian youths wielding axes. The two campaigns created psychological terror and undermined the Israeli public's sense of safety, while they invested minimal effort and did not require organizing activists or building an intelligence infrastructure in order to carry out attacks.[54]

Compared to other terrorist organizations, the Islamic State has the most advanced technological and communications capabilities. It has established a well-organized infrastructure for employing social media: it develops applications, posts various instructional materials on JustPaste; distributes audio messages on SoundCloud; shares photos on Instagram and Snapchat; distributes videos on WhatsApp; and uploads *anasheeds* on YouTube. Despite efforts of various countries, media conglomerates, and Internet companies to fight the phenomenon, the Islamic State uses technological tools to bypass restrictions and has remained relevant over time in the media and social media. In that sense, it is light-years ahead of the other terrorist organizations, which have yet to learn to market and distribute materials virally and still lack the resources possessed by the Islamic State.

It can be assumed that the Islamic State segments and focuses its social media presence, using tools for campaign management, constant optimization, and follow-up of performance. Others are inadvertently involved in these cyberspace campaigns and serve as important tools in promoting them. These include social media companies, such as Facebook, and search engine companies, such as Google. These companies examine users' keystrokes and build enormous databases to analyze users' behavior on the Internet. Clients thus become profit-yielding data. All of this takes place through information exchanges with businesses interested in consumer behavior of every kind, including opinions, desires, and ambitions. This information can serve to improve the viral distribution of the Islamic State's campaigns by enabling consumers to choose their preferred content, including videos, songs, content pages, and more, all which are linked to the Islamic State.

Conclusion

The Internet in general and social media in particular have become the most influential factor affecting the behavior of human society in this era. Life online and offline have become part of a seamless fabric. Given that the barriers between the physical and cyber worlds are crumbling, the combination of Internet content and emotions can affect consciousness. Similarly, the activity of terrorist organizations in cyberspace influences terrorist acts in the physical world. In the Internet era, a terrorist organization that wants to achieve political goals and recruit supporters needs to develop

capabilities that will allow flexibility and immediate change while adapting its messages to a focused or broad audience.

The Islamic State operates in a geographical and physical space, in cyberspace, and in the conscious realm. It has identified social media as a critical resource that is useful for communication among members, but also as a foundation for its propaganda, psychological warfare, and mobilization of new recruits. The organization also exploits the Internet to influence and induce individuals and groups to carry out terrorist acts. Other terrorist organizations are learning from this successful model and are striving to achieve similar capabilities. As various nations invest more resources to close their borders to Islamic State recruits and block their physical mobilization, the Islamic State likely will redouble its efforts in cyberspace – which is borderless – to recruit hackers and construct strategic cyberattacks in their nations of origin. Greater efforts of intelligence agencies to monitor and identify online activity by Islamic State activists will likely transform the Islamic State's online presence from overt to covert. This would involve a more massive use of dual-purpose commercial encryption technologies and Darknet/TOR networks.

The most significant challenges facing the espionage and intelligence communities are the formulation of new tools for eliciting information, monitoring, and enforcing the use of social media; foiling incitement that leads to terrorism; and engaging in proactive efforts to thwart potential attacks. It is therefore important to conduct a proactive battle, using technological tools, to identify those with the potential to carry out terrorist acts and be on the offense against online incitement. Many nations lack clear directives on how they can act against online terrorist activity, and significant judicial and enforcement mechanisms still need to be implemented, including the formulation of legislation and enforcement codes against online radicalization and incitement. The first stage in formulating policy necessitates establishing the link between online incitement and physical acts, with online incitement being the engine that drives terrorist attacks perpetrated by people who are not necessarily members of any terrorist organization.

The Islamic State has constructed a narrative that draws public and media attention away from the territories under its control. The Islamic State diverts media and public attention away from its oppression of the population, executions, economic woes, starvation, losses on the battlefield, and the like. In order to reduce the Islamic State's global influence and

presence, it is critical to find the mechanisms and tools to "decompress" time and space and restore the public perception of the organization to its natural dimension, while forcing the Islamic State to operate in constrained spheres where it will be able to target only very limited audiences, thus causing its influence to wane.

The Islamic State is a global phenomenon and therefore a global threat. As a response, we must broaden our thinking and realize that this is not only a challenge at the intelligence and military levels, but also a multidimensional social and cultural phenomenon that cannot be tackled alone by either cybernetic or kinetic means. While some nations are already active in presenting a counter narrative to confront the Islamic State, this counter narrative is limited and focuses mostly on reducing Western recruitment to the Islamic State and the religious radicalization on the Internet. In the present reality in which the Islamic State determines the way it is perceived, it is imperative for the West to allocate resources to shape and alter this perception. The West needs to engage in a cybernetic battle, and engage in operational activity within the physical territory under Islamic State. This operation could include psychological and information warfare campaigns, but should also focus on training reliable locals opposed to the Islamic State. They would become agents of knowledge and use low-signature, anonymous technological means to gather intelligence, produce objective content, and high-level visual reports to disseminate in a focused manner to target audiences who are susceptible to the Islamic State's influence.

The formulation of effective tools to fight the Islamic State could bolster the response to other non-state actors and terrorist organizations, which are inspired by the Islamic State, and have adopted similar techniques to further their terrorist activities. The coalition's bombing campaign has hindered the successes of the Islamic State on the battlefields in Syria and Iraq and has wiped out many of its activists, but it has failed to diminish its overall number of activists because the steady stream of new recruits fills the emptied ranks. To reduce the number of volunteers entering the areas controlled by the Islamic State, it is not enough to close physical borders, which so far has yielded unimpressive results; rather, it is imperative to weaken the motivation of potential recruits in turning to jihad. In order to diminish the Islamic State's image, it is essential to undermine its narrative and the perverted utopia it presents. To do so, we must wage a proactive cyberwar that incorporates a battle over the regnant narrative.

Notes

1 For more on the concept of the space-time compression, see David Harvey, *The Condition of Postmodernity* (Cambridge and Oxford; Blackwell, 1989); Avi Rosen, "Compressing Space and Time in Cyberspace Art" (PhD diss., Tel Aviv University, 2009), http://www.sipl.technion.ac.il/~avi/tsc/avi_rosen_TSC.pdf.

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14 English translation of inaugural address given by the Islamic State's leader at https://ia902501.us.archive.org/2/items/hym3_22aw/english.pdf.

15 Schweitzer and Oreg, *Al-Qaeda's Odyssey to the Global Jihad*, p. 18.

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